(7) Geriatric Assessment: The Canadian Experience

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THE NATIONAL ADVISORY COUNCIL ON AGING
LE CONSEIL CONSULTATIF NATIONAL SUR LE TROISIÈME ÂGE

Canada

GERIATRIC ASSESSMENT -- The Canadian Experience

Topical texts on geriatric assessment
in Canada

Papers by

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March 1989
National Advisory Council on Aging

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FOREWORD

The Writings in Gerontology series is intended as a vehicle for sharing ideas on topical issues related to the quality of life of seniors and the implications of an aging population. It is produced as part of the mandate of the National Advisory Council on Aging to publish and disseminate information and to stimulate public discussion about aging.

The Council endeavours to ensure that the articles in the series provide useful and reliable information. Most of the texts are original manuscripts. Some are written by Council staff, others by experts in their fields.

This series is addressed to seniors and the people who care about their well-being. It is hoped that readers will find the Writings useful.

The Council welcomes comments on the topics selected as well as on the content of the articles.

Susan Fletcher
Director
National Advisory Council on Aging

PREFACE

As Canada's population ages, the need for geriatric assessment sources becomes more apparent. It is increasingly recognized that seniors' health and well being are affected by factors such as their environment and social circumstances as well as by their physical or mental status. Geriatric assessment represents a holistic approach to a senior's health bringing together professionals from a variety of disciplines to work with the senior as a team to better understand the nature of his or her health difficulty and to maximize his or her autonomy.

The following papers discuss the background of geriatric assessment in Canada, specific modes of practice and current methods. This Writing is the result of the Geriatric Assessment Workshop held in Ottawa on September 25-26, 1988. The Workshop was co-sponsored by the Health Services and Promotion Branch, Health and Welfare Canada (HWC), and the Council. The efforts of Pauline Chartrand, Consultant in Long-term Care, in arranging this co-venture with us are recognized. A number of other people also made the endeavour possible.

Council wishes to thank all participants at the Workshop for contributing their thoughts and time, and the five geriatricians who put pen to paper and wrote about geriatric

assessment at NACA's request. Sincere thanks are due as well to Dr. William Dalziel, Head of Geriatrics, University of Ottawa, and Head, Geriatric Assessment Unit, Ottawa Civic Hospital, for chairing the Workshop. Dr. Michel Baron, President of the Canadian Geriatrics Society, also provided much insight. Retiring from his retirement--or do geriatricians ever retire?--Dr. Jack MacDonell kindly reviewed the five papers and provided his comments for consideration by the authors. They are:

- Dr. David Gayton, Program Director, Geriatric Medicine, McGill University, Associate Member of the School of Physical and Occupational Therapy, McGill University, and Director, Division of Geriatric Medicine, Department of Medicine, Royal Victoria Hospital. He received his Ph.D, from the University of British Columbia in 1970 and his MD., from the same university, in 1976. He has authored over 15 papers in the field of aging, on subjects such as Predicting the Outcomes of Hospitalization in the Elderly, Trial of a Geriatric Consultation Team in an Acute Care Hospital, and Hypertension in the Elderly.

- Dr. James L. Kirkland, Medical Director, Central Service, University of Toronto Regional Geriatrics

Programme, Director, Geriatrics Services, Toronto General Hospital and Chief, Geriatrics Service, The Queen Elizabeth Hospital. A graduate of the University of Toronto, he interned at the Toronto General Hospital and did his residency in Internal Medicine at the same hospital. He holds a diploma in internal medicine from the American Board of Internal Medicine. He has authored and co-authored numerous papers on issues relating to aging and is the recipient of the Dr. W. Anderson Award for Teaching Programme Development, the Toronto Fund Award for Postgraduate Research, the Issei Prize in Medicine and Surgery, the Dr. Mitchell Kohan Scholarship for General Proficiency in Medicine, the Walter F. Watkins Scholarship for General Proficiency in Medicine and the Michael Levine Prize for General Proficiency in Medicine.

- Dr. Christopher Patterson, Associate Professor and Head, Division of Geriatric Medicine, Department of Medicine, Faculty of Health Sciences, McMaster University. He is also Head, Geriatric Services, Chedoke-McMaster Hospital, Hamilton, Ontario. He is a graduate of Kings College Hospital Medical School, University of London, England (1970). His research interests include health services for the elderly and various aspects of

andocrinology, cognition and cardiology in the elderly. He is the author of over 40 papers on the above-mentioned topics.

- Dr. John A. H. Puxty, Head of the Geriatric Assessment Program at Ottawa General Hospital, Associate Professor of Medicine at the University of Ottawa and a geriatrician at both the Elisabeth Bruyère Centre and the Ottawa Civic Hospital. His research interests include the epidemiology of cognitive disorders, the development of assessment tools, falls in the elderly, the evaluation of geriatric services and the uses of computer technology in education. He is the author of numerous papers on these topics. He was recipient of the Frohlich International Visiting Professorship to USA in 1985.

- Dr. Duncan Robertson, Consultant in Geriatric Medicine in Victoria and Calgary and Medical Consultant to the Senior's Drug Action Programme of the Ministry of Health, Government of British Columbia. An honours graduate in medicine of the University of Durham (Newcastle-on-Tyne Medical School), he interned in Ottawa and completed his post-graduate training in internal medicine at the University of Western Ontario.

He has published in cardiology and geriatric medicine and has contributed chapters to a number of textbooks of geriatric medicine, pharmacology and therapeutics and health care organization.

Finally, the Council thanks NACA's staff, particularly Francine Beauregard, Chief, Projects, Education and Communications, for bringing this project to fruition.

Charlotte Matthews, Ph.D.
President
National Advisory Council on Aging

SPECIALIZED GERIATRIC ASSESSMENT IN CANADA

by

Duncan Robertson, FRCP, FRCPC

March 1989
National Advisory Council on Aging

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INTRODUCTION

May I thank the National Advisory Council on Aging for making possible this Geriatric Assessment Workshop. It gives us the opportunity to discuss the special health and social needs of frail, disabled elders and the ways these needs may be addressed. The task assigned to me was to outline the history of geriatric assessment units in Canada, but I negotiated a less restrictive mandate--a review of the history of specialized geriatric assessment services in Canada since, in some provinces, comprehensive geriatric assessment is available through service delivery organizations other than acute hospital in-patient geriatric assessment units.

The reader of a historical review should remember that because historical events do not unfold as they ought to, the task of the historian is to rectify the defect and record occurrences as they <u>should</u> have happened. With this in mind, corrections of fact and interpretation of the draft document were requested of conference attendees, and I am grateful to Dr. Warren Davidson of Moncton and to Dr. Jack MacDonell of Victoria, formerly of Winnipeg, for their helpful comments, which have been incorporated in the revised manuscript.

Ignatz Nascher, a New York physician and lecturer at Fordham University, coined the term 'geriatrics' in the early years of this century; however geriatric medicine, as a discipline, first made its appearance in Britain in the late 1930s and early 1940s. Working in long-term care wards of a London teaching hospital, Dr. Marjorie Warren first demonstrated that direct admission to long-term care facilities was unsatisfactory and inevitably led to misplacement of old patients.[1] Warren described a system of total patient assessment based on full physical, mental and social diagnosis. Only after appropriate treatment and rehabilitation of conditions identified during the assessment phase were decisions made regarding the appropriateness of admission to long-tern care. Warren demonstrated that many patients who initially seemed to require long-term facility care could be returned to the community to live in their homes.

The British National Health Service, established in 1948, included special services for the elderly, and with this statutory support British geriatric medicine gradually expanded its role to include all aspects of care of the elderly with the exception of primary care. Comprehensive assessment, prior to treatment and rehabilitation, remains the cornerstone of care of the elderly; in its submission to the Forum of Nongovernmental Organizations at the World

Assembly on Aging, the British Geriatrics Society summarized the contribution of geriatric medicine to health in old age:

> ... A philosophy of treatment for old people has developed in which full assessment of the physical, mental and social status of each individual is the cornerstone. Illnesses are no longer left untreated because of misconceived pessimism about their outcome. Instead, every effort is made to restore the aged sick person to a degree of health which will permit his return to independent existence at home.[2]

CANADIAN MODELS OF GERIATRIC ASSESSMENT UNITS

1. DEPARTMENT OF VETERANS AFFAIRS INITIATIVES

In Canada, shortly after World War II, assessment and re-establishment/rehabilitation units were set up in each of the Department of Veterans' Affairs districts across Canada. The primary function of these units was to assess the financial, social and work abilities of World War II veterans and enable them to become established in the community. It later became apparent that veterans of other wars had needs in these three spheres and indeed, veterans' home facilities had been in operation for the housing of veterans of the previous wars who were unable to provide for their own day-to-day existence. These facilities were in operation by the time World War II started. After those hostilities were over, it became a matter of assessing new applicants for admission to veterans' homes. As the need for community re-

establishment for the veterans of World War II waned, the need for assisting aging World War II veterans and World War I veterans who were already aged became increasingly pressing. As a result, a number of assessment and rehabilitation units took on the function of geriatric assessment and rehabilitation units serving older veterans.

An early example of an assessment and rehabilitation service that subsequently developed into a full spectrum of geriatric care was established at Deer Lodge Veterans Hospital in Winnipeg. Since the hospital was at that time also an acute care veterans' hospital, the range of services extended from acute care through geriatric assessment and treatment, long-term nursing home and extended care home care, geriatric day hospital and out-patient care. By the late 1960s similar developments were under way in other Veterans' hospitals, Sunnybrook Hospital in Toronto, Ste Anne de Bellevue near Montreal and, in the 1970s, at Westminster Hospital, London, Ontario and Shaughnessy Hospital in Vancouver.

2. ACUTE CARE HOSPITAL GERIATRIC SERVICES

Acute care hospital-based geriatric services were first established at Toronto Western Hospital for residents of Metropolitan Toronto homes for the aged who became acutely

ill. A group of medical beds was set aside to which these patients were admitted; once treatment of acute illness and rehabilitation was completed, residents were returned promptly to the home from which they were admitted.

In the early 1970s a demonstration Geriatric Assessment and Rehabilitation Unit was established in the Health Science Centre in Winnipeg. Later, this arrangement became permanent and was combined with a holding unit of about twenty beds for patients awaiting transfer to nursing homes or extended care hospitals. In St. Paul's Hospital, Vancouver, an Acute Geriatric (over 80) Unit was established in 1980 and linked to a Geriatric Rehabilitation Unit (primarily for the elderly) in an acute care hospital.

3. GERIATRIC ASSESSMENT UNITS

From these early developments in Canada--and those in the United States, where Williams was developing the concept of geriatric assessment at Monroe County Hospital in Rochester, New York--arose the concept of geriatric assessment as it is now practised. A recent consensus statement from the United States National Institutes of Health summarizes the benefits of geriatric assessment:

> Accumulated evidence indicates with moderate to high confidence that comprehensive geriatric assessment is effective when coupled with an ongoing implementation of the resulting care plan. The settings in which effectiveness has been convincingly demonstrated are the combined geriatric assessment and rehabilitation unit and the inpatient geriatric assessment unit.[3]

In the late 1970s the Health Services and Promotion Branch of Health and Welfare (Canada) published guidelines for geriatric units in hospitals and geriatric day hospitals,[4] and an acute care hospital-based geriatric unit and geriatric day hospital following these guidelines was established in Saskatchewan.[5] By the mid-1980s similar acute care hospital-based geriatric assessment units were operating in Montreal, Quebec; Hamilton, Toronto and Ottawa, Ontario; and Saskatoon, Saskatchewan.

The typical acute care geriatric assessment unit of about twenty in-patient beds admits patients directly from the community but may also accept patients transferred from other acute care wards. Patients remain in the unit an average of three weeks; during their stay, multidisciplinary assessment is completed and treatment and rehabilitation are initiated. Patients who require in-patient stays in excess of a month or so may be referred to geriatric rehabilitation programs (where available), or they may continue treatment and rehabilitation during attendance at a geriatric day hospital.

The geriatric day hospital or day assessment service may be part of the assessment unit or affiliated with the service. It provides similar assessment, treatment and rehabilitation services. In most cases, the medical staff of the day hospital and in-patient service are shared and, in some cases, nursing, therapy and social work staff provide continuity of care by dealing with patients before and after discharge. The credibility of in-patient geriatric assessment units has been greatly enhanced by the publication of Rubenstein's study of the effectiveness of a similar unit in the United States.[6]

Geriatric assessment units with similar operating principles, but located in continuing care hospitals, exist in British Columbia, Nova Scotia and London, Ontario. For example, in British Columbia, geriatric assessment is available through five Short Stay Assessment and Treatment Units (SSATs). These units, while not staffed to meet the needs of acute care patients, nevertheless provide assessment and treatment for individuals referred by long-term care assessors and family physicians. In some short-stay assessment and treatment units, the main focus is psychogeriatric assessment, and in all units individuals with mental health disturbances, with or without physical illness, form the majority of patients served.

4. GERIATRIC ASSESSMENT IN MULTI-LEVEL GERIATRIC CENTRES

An early example of a multilevel geriatric centre is the Baycrest Centre in Toronto. The centre provides medical diagnostic assessment as well as functional assessment at a number of levels, from independent living through nursing home care. The recent addition of a chronic care facility, Baycrest Hospital, extends the range of services available on the campus, so that the long-term care needs of elderly residents can be met across the spectrum of care. Concentrated care and convalescent units in Baycrest Hospital minimize the need for transfer of patients off-campus. Residents who need concentrated nursing care but not intensive medical care can be accommodated in the centre and managed without transfer to an acute care hospital. Cross-appointment of physicians to acute care hospitals also provides a bridge between acute hospital and the centre.

At St. Boniface General Hospital in Manitoba and Edmonton General Hospital in Alberta, newly constructed auxiliary or extended care wings attached to acute care hospitals were transformed into comprehensive geriatric medicine services. St. Boniface General Hospital geriatric service, which opened in June 1974, included services such as progressive patient care, maintenance, intermittent

readmission, holiday relief, social relief, day hospital and terminal or palliative care.[7]

As geriatric services evolved and as new geriatric specialists were recruited, the importance of acute care geriatric services became apparent; as a result, geriatric specialists now provide out-patient geriatric assessment through day hospitals and outreach clinics and in-patient assessment on a consulting basis or by participation in acute care medical teaching units. A similar pattern of development is being followed at Edmonton General Hospital, where the geriatric service was first housed in a geriatric centre adjacent to an acute care hospital. Geriatric specialists now provide acute care consultation, bridging the geriatric service and acute care hospital. As this service develops, patients who might benefit from rehabilitation in the geriatric centre will be identified, either in the community or in acute care hospital units, and transferred, where appropriate, to the geriatric centre for treatment and rehabilitation before being discharged home or to facility care.

5. GERIATRIC CONSULTATION TEAMS

Geriatric consultation teams have been proposed as an alternative or to complement geriatric assessment units. A

number of such teams have been developed in North America centres, particularly in the United States. Typically, a geriatric consultation team consists of a physician, nurse, social worker and/or therapist who, on a referral basis or based upon screening criteria, provide advice and service arrangements for elderly patients on medical and surgical units.

Two published reports of Canadian geriatric consultation teams have appeared recently.[8,9] In respect of one study,[8] which failed to demonstrate significant differences in measured outcome between study and control subjects, operational issues have been raised as possible explanations. The geriatric consultation services were not targeted to high-risk elders but were available for all patients aged seventy and over. Perhaps clinically and statistically significant differences in outcomes for the very old, frail and disabled were masked by minimal differences in outcome in other subjects, whom one would not expect to benefit from comprehensive geriatric assessment and treatment. This study has resulted in particular attention being paid to identifying sub-groups who will benefit from geriatric assessment and rehabilitation.

Despite the recommendation of the CMA report on Health Care for the Elderly[10] that elderly people should be assessed

in their own homes, there are limited data to support the efficacy of community-based geriatric assessment alone or in combination with geriatric day assessment or in-patient assessment. The Ottawa geriatric service is about to commence team assessment of elderly patients in the community, and evaluations of the experience of these outreach teams are eagerly awaited.

6. ASSESSMENT AND PLACEMENT SERVICES

Systematic geriatric assessment prior to long-term care placement has been achieved in a number of ways in Canada. In almost all jurisdictions, completion of a medical report by the primary care or referring physician is necessary before admission of a patient to a long-term care facility. In some regions, screening committees have been established to review medical reports submitted by referring physicians or other health professionals. In some cases, screening committees require additional information to be submitted or require consultation before placement decisions are made. The first example of a regional assessment service of this type was developed in Hamilton-Wentworth in the 1970s and reported by Bayne and Cayhill.[11]

In provinces using the single-entry model to community- and facility-based long-term care services, screening

assessments by community assessors (usually nurses and social workers) can identify appropriate clients for in-patient and out-patient geriatric services promptly at a point when disability may be reversible and the burden on community care providers may not have reached crisis proportions.

Further development of this model has occurred in Manitoba, where a panel system is in operation. The community- or hospital-based long-term care assessor recommending facility placement for a client must justify the clinical grounds for this recommendation before a panel. The panel reviewing the need for facility placement includes individuals knowledgeable about local resources and the needs of the elderly. In the large metropolitan areas, the panel includes physicians with expertise in geriatric medicine. In this way, the decision to accept a patient for facility care is reviewed at a time when remediable problems may be identified and appropriate action taken. Referral to assessment and treatment services may result in postponement or avoidance of facility placement.

Assessment prior to long-term care service arrangement can be conceptualized as a tiered process. The first level of assessment consists of review of available documents and medical and functional information collected by an assessor. In cases where the need for facility care is unequivocal, a

decision for facility placement is made without hands-on clinical review by a geriatrician. The patient's own physician supplies the medical data. When, on initial review of documentation, the patient/client's history suggests possible remediable problems or high-risk indicators are identified, questions are addressed to the referring physician or other health professionals involved in the patient's care--the second level of assessment. This may take the form of suggested investigations, consultations or treatment, and decisions regarding the need for long-term care admission may be deferred until requested information is available. The third level of assessment is available to only a proportion of cases reviewed. Here the long-term care assessor, or a panel reviewing the case, recommends to the attending physician that referral be made to specialized geriatric or psychogeriatric services for assessment and treatment before decisions can be made regarding the need for continuing care service in the community or admission to a long-term care facility.

To date, little progress has been made in matching geriatric assessment resources with need for these resources within a defined population. A first attempt in this direction has been made in Ontario with the publication of Guidelines for Establishment of Regional Geriatric Programs.[12] An estimated ten to fifteen per cent of the

elderly may benefit from specialized geriatric assessment services, and these guidelines recommend that programs be developed to serve target populations of between 30,000 and 50,000 persons aged sixty-five and over.

When such guidelines are implemented it should be evident that age structure within the elderly population will influence greatly the number of persons who might appropriately be referred to geriatric services. Proportionately more very old persons (eighty years and over) may benefit from comprehensive geriatric assessment treatment; thus estimates of need for different age groups within the elderly population are required if regional resources are to be developed appropriately. The components of a regional geriatric service proposed in the Ontario guidelines include outreach multidisciplinary teams, out-patients clinics, day hospitals and dedicated geriatric assessment in-patient beds.

Whether regional geriatric services should manage assessment and placement (A&P) services, providing single entry for the elderly into long-term care facilities and programs, or act as clinical resources to A&P services is debatable. Where single-entry systems are in operation and well managed, a regional geriatric program can concentrate on its primary function--comprehensive geriatric assessment,

treatment and rehabilitation. Where A&P services do not exist or are poorly developed, the evolving geriatric service must, of necessity, take a leadership role in establishing such a service.

7. SPECIALIST MANPOWER ISSUES

The elderly patient with a single system disease or problem that can well be managed by existing health care services does not need referral for comprehensive geriatric assessment. Patients appropriately referred to geriatric assessment services are the frail elderly. Multiple health problems, both physical and mental, frequently coexist, and patients are often dependent upon other persons for their continued survival in the community. Their ability to remain at home is often precarious, since any deterioration in their health or functional status or change in their caregiver's ability or willingness to continue to provide care often results in admission to an acute care hospital and/or a request for long-term care placement.

Specialized geriatric services do not seek to assume primary care of the elderly--even of the frail elderly, but rather to support the family physician in prevention, diagnosis, treatment, rehabilitation, and continuing care of his/her elderly patients.

Prompt, skilled assessment of the physical, mental and social variables that influence health and function of the frail elderly identifies potentially remediable causes of disease and dysfunction. Assessment is often followed by specialized programs designed to restore function and to reduce the burden on the caregiver so that prolonged, inappropriate hospital stays or unnecessary institutionalization can be avoided.

An important limit on the speed with which geriatric assessment can be made widely available is the availability of geriatricians. It is not uncommon for a geriatrician to spend one and one-half hours or more in the initial consultation with the patient, and additional time may be required to interview family members and caregivers, review health records, attend case conferences, prepare reports and communicate with the referring physician and other professionals--to say nothing of teaching and administrative duties. Since professionals of other disciplines are usually in greater supply, it is the availability of the physician that limits the number of geriatric assessments that can be performed by the team. These realities carry powerful implications for specialist manpower development and for reimbursement; these implications demand attention if a system providing clinically appropriate and cost-effective care of the frail elderly is to be developed.

In this brief review of the origins and development of specialized geriatric assessment in Canada two omissions (at least) are recognized by the author. The first is geropsychiatric assessment where it occurs separately from comprehensive geriatric assessment. For a recent review of geropsychiatric assessment the reader is referred to a recent publication of the Mental Health Division of Health and Welfare Canada.[13] The second omission is an account of the role of geriatric day hospitals and special geriatric clinics and outreach teams in Canada in making geriatric assessment services available to out-patients. Whatever the service delivery vehicle for geriatric assessment, the principles remain comprehensive assessment of physical and mental health, functional and locomotor abilities, and social and caregiver issues.

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THE PHILOSOPHY AND PURPOSE OF GERIATRIC ASSESSMENT

by

David Gayton, M.D.

March 1989
National Advisory Council on Aging

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INTRODUCTION

The traditional pathology-oriented approach to medicine has served us well and led to spectacular advances. This approach, in simple terms, seeks to locate the problem, determine its nature and fix it. Pneumonia, at any age, usually responds well to this approach. Unfortunately, however, the approach often falls short when dealing with the frail older person. This person may have limited organ reserve, with low tolerance to any form of stress, and typically suffers from a number of chronic diseases. Locating the problem may be a complex process requiring the skills of many disciplines. Cure may be beyond our ability. The capacity to perform activities of daily living and more complex social functions is eroded, and restoration or maintenance of these functions becomes all-important. These functions must be looked at in the context of the person's social and physical environment. Hence, the development of the comprehensive geriatric assessment as described by Duncan Robertson.

Our approach to geriatric assessment owes much to British geriatricians. Their approach, best described in the work of Professor Williamson of Edinburgh, is broad, presenting geriatric assessment not simply as something that takes place in a particular unit, but as one of the functions

of a comprehensive geriatric service which, in turn, cannot be divorced from the rest of the health and social services. More recently, geriatricians in the United States have looked intensively at geriatric assessment with a focus on the various components of geriatric service and geriatric assessment. This concentration on the trees rather than the forest is perhaps inevitable in a country whose health system does not lend itself well to the development of comprehensive geriatric services. Canada's system is more akin that of the British and has tolerated rapid expansion of geriatric services in the last 20 years. Considering this, and the fact that the term philosophy is included in my title, I feel free to take the broad view and look at several issues with an indirect but important bearing on geriatric assessment. Later discussants will deal more with the trees.

PRIMARY PREVENTION

Much of what afflicts us in old age begins well before old age. Indeed, we begin aging on the day of conception. Many of the diseases that disable the elderly are influenced largely by lifestyle throughout adulthood--by eating, drinking, smoking and exercise habits. Recent declines in mortality rates from stroke and cardiac events have likely been influenced by lifestyle changes in our society. While unproven, it is also likely that morbidity from these

diseases, seen commonly in the geriatric setting, can also be reduced.

Examples abound of people who maintain physical vigour into very old age. It is likely that regular exercise enhances this vigour. Similar strategies must be sought and promoted for the maintenance of mental vigour. Through such strategies, we might hope to achieve what James Fries describes as a compression of morbidity at the end of life.

Independence in old age requires more than physical and mental vigour. Social, economic and environmental obstacles must be anticipated, avoided, or removed if possible. Finally, as individuals, as health professionals, and as a society we must anticipate and plan for the possibility of severe disability at the end of life, so that the individual can exert some control over his destiny during a period when little immediate control may be possible.

Preventive strategies of this nature are in their infancy. They must be developed and promoted if we are to prevent or curtail the problems that lead to the need for the comprehensive geriatric assessment.

SECONDARY PREVENTION - CASE FINDING

It is important to detect decline in the old person at an early stage, when intervention is most likely to slow, halt, or reverse that decline. All too often the old person comes to the notice of the geriatric service in an advanced stage of decline, at which point rehabilitation is impossible or painstakingly slow. All too often, that person is brought to our notice not by a health professional but by a relative, friend or neighbour.

Case finding of those elderly at risk should take place at the level of primary health care. Unfortunately, case finding is often far from ideal. This is not surprising. In Montreal we found that of patients 70 years and older admitted on an emergency basis to our medical wards, one-third were without a regular physician. A large number of these people were more or less house-bound and were unable to find a physician to come to their home. Forty per cent were dead within six months. Even when an older person has a regular physician, significant problems may go undetected. This may result, in part, from the fact that physicians spend less time with their elderly patients than with their younger patients.

In my experience, case finding improves markedly as home care services develop. Early detection is further enhanced when these services work closely with primary care physicians. Alas, this is not often the case. In downtown Montreal, home care services have resorted to hiring their own physicians to fill the many gaps.

Case finding must be directed at high-risk populations; otherwise it is inefficient and probably ineffective. Professor Williamson suggests the following high-risk groups:

1. The very old, especially those living alone

2. The recently widowed, especially in the absence of supportive relatives

3. Those with chronic disabling conditions, such as arthritis, stroke, dementia, depression

4. Those recently discharged from hospital; thirty per cent will be back in hospital within six months

5. Those recently relocated

The case finder must have easy access to resources, such as a geriatric service, that can do something about the problems found.

Strategies to improve better case finding should be directed towards the following areas:

1. Ensuring primary care for the elderly, including care in the home if necessary

2. Increasing awareness among primary care providers of the special problems of the elderly and of the danger signals that should trigger prompt action

3. Promoting co-ordination among the primary care physicians, home care providers, and geriatric services.

WHO NEEDS A GERIATRIC ASSESSMENT?

The implication of the preceding discussion is that geriatric assessment is a broad concept that must be applied widely. I will now focus on geriatric assessment as an intervention that takes place in a geriatric service. Since these services are limited, it is appropriate to try to target the populations most likely to benefit from the intervention.

Age per se should not be an excluding factor. While the very old (80 years and over) dominate the geriatric services, younger disabled adults benefit from the approach of geriatric assessment. (Indeed, those managing victims of AIDS have much to learn from our approach.) The following are candidates for geriatric assessment:

1. Those with a decline in functional capacity, especially a decline in activities of daily living. New onset of falls, incontinence and confusion require prompt action. Those with 'stable' physical and mental disabilities should be at least screened, as they may, if not previously assessed, have potential for improvement.

2. Those moving to a higher level of care, especially when a move to a nursing home or chronic care hospital is contemplated.

3. Admission to an acute care hospital. As many as 25 per cent of those over the age of 75 have problems appropriate for geriatric assessment. Virtually all elderly patients admitted to orthopedic floors with fractures are in need of this approach.

4. Repeat visitors to the emergency room, especially when polypharmacy is involved.

This list is not complete, and I have one important rider. In studies evaluating the effectiveness of geriatric assessment, the demented and terminally ill are often excluded because their condition is not reversible. This must not lead us to conclude that they are bad candidates for assessment just because they are bad candidates for 'positive' results in studies.

THE PURPOSE OF GERIATRIC ASSESSMENT

In describing the aim of a geriatric service, Williamson also described the broad aim of the geriatric assessment, which "is to enable old people to maintain optimum health, fitness and independence and to ensure that they retain maximum control over their lifestyle with the same range of choice as for other adults in their society."

The assessment begins with an investigation of the patient's needs in the areas of health, physical, mental, and social functioning, and environment. The family is an integral part of this assessment. The assessment must then lead to a plan of action that provides or ensures the following: treatment, rehabilitation, primary care, case co-ordination, and appropriate use of resources. The plan of action must have the willing co-operation of the patient, her

family and all other caregivers. Otherwise, it is bound to founder.

THE ASSESSMENT TEAM

The geriatric assessment usually requires the participation of professionals from a variety of disciplines. Core members of the team must have the skills and enthusiasm for treating the elderly and should include a nurse, social worker, physical therapist, occupational therapist, physician and, if possible, a psychiatrist. While it is generally accepted that the interdisciplinary team is the key to geriatric assessment and care, it is an expensive intervention, and more research is needed into how to harness it most effectively. The core team needs easy access to full diagnostic services and to expertise in other areas such as nutrition, speech therapy, audiology, dentistry, ophthalmology, urology, neurology, and orthopedics. For this reason, the team is best based in a general hospital. Care should be taken to involve the family, other caregivers and primary care professionals in the assessment process.

THE SETTING

The setting for the geriatric assessment will be dealt with in detail by subsequent discussants. It is important

that the team possess the flexibility to assess the older person in virtually any setting, be it on a special geriatric ward, on other hospital wards, in the day hospital, in the emergency room, in the clinic or in long-term facilities. Few assessments of patients living in the community are complete without an assessment of the patient in the home. This flexibility should ensure that the assessment is tailored to the patient (rather than the reverse) and, along with a continuum of services within the geriatric service, should avoid over-kill. For example, admission to an in-patient assessment unit of someone able to attend a day hospital is probably wasteful and potentially hazardous.

As well as flexibility, the team must possess speed in responding to the patient's needs. Waiting lists disrupt the smooth operation of a geriatric service and spell disaster for the patient.

Of special concern is the provision of geriatric assessment in rural areas. Unfortunately, geriatricians are few and spend most of their time in academic urban settings. A number of pilot projects are under way in Manitoba, Nova Scotia and northern Ontario and should be watched with great interest.

IS THE GERIATRIC ASSESSMENT EFFECTIVE?

The short answer to this is yes. The long answer is a complex maybe. Several points are pertinent:

1. Descriptive studies of the process are, not surprisingly, uniformly glowing. As the experimental design becomes more rigorous, results become more mixed. These mixed results may reflect not so much the value of the geriatric assessment as the limitation of experimental design in measuring a process so complex.

2. Many of the outcomes desired, such as quality of life, lack of suffering, or satisfaction of the patient or family, are not easily or often measured.

3. All studies reflect local conditions and few, if any, are universally applicable. Outcomes may be heavily influenced by the nature of the system around the study intervention, by the quality of the alternatives (the competition), and by the ability or inability of the study group to use other resources that may benefit their subjects. Negative results are more likely when the study intervention is not part of a continuum of geriatric care. Pitfalls abound.

4. Negative studies are more likely to remain unpublished or obscure than are positive studies.

Despite these problems, there is growing evidence that a geriatric assessment is an effective intervention. Positive outcomes are listed below in an order that reflects, in the author's opinion, the strength (decreasing) of the supporting evidence:

1. Increased number of diagnoses. This does not equate with "improved diagnostic accuracy", as is often claimed, nor does it lead necessarily to improved management.

2. Prolonged survival. This is an easy factor to measure and shows up consistently. Importantly, it is not accompanied by increased use of institutional beds or, on average, with decreased functional capacity.

3. Increased use of home services. This should be attained easily if the assessing team has access to plentiful home care services; this was probably not the case in many studies. It can increase overall costs.

4. Decreased use of acute hospital beds. Such a result is highly desirable but needs confirmation. Some studies

have shown an increased use of hospital beds, but this is a hazard facing all such studies; cases may be uncovered that traditionally were not.

5. Decreased use of nursing home beds. Again, this needs confirmation because a large number of studies have been negative. This result, in particular, depends on local conditions and on the local definition of the various levels of institutional care.

6. Reduced medical care costs. Everyone is so eager for this to be true that cost accounting often becomes quite imaginative. Some studies have shown increased cost. It is really a matter of whether the increased costs associated with prolonged survival and greater use of home care services (#2 and #3 above) can be offset by cost savings resulting from decreased use of acute hospital and nursing home beds (#4 and #5).

7. Improvement in functional status. The lack of results in this area is disappointing. Targeting may be a problem. If assessment improves survival without a decrease in average function, then the overall function of the population is increased.

8. Improvement in cognition and affect. Assessment teams deal mainly with irreversible cognitive problems; improvement is rarely expected. Affect is more difficult to measure and has not been looked at closely in the setting of the geriatric assessment.

It is probable that the geriatric assessment is most effective when treatment and rehabilitation are carried out by the same service that assesses the patient.

In practical terms, it would appear that geriatric assessment is here to stay. We are all doing it with enthusiasm. Further expensive randomized controlled trials to prove its effectiveness would have limited impact, at least in Canada. Our energies might better be directed to improving the process of assessing, increasing our ability to target appropriate people into appropriate services, and co-ordinating the services we already offer the elderly.

CO-ORDINATION AND IMPLEMENTATION

Several further issues regarding the process of geriatric assessment and provision of geriatric services should be addressed in this forum.

Decision making It seems clear to some of us in this field that the geriatric assessment team, in conjunction with the patient, family, and primary care team, is best positioned to determine the service needs of the patient, but not everyone agrees. In Montreal, for example, the decision to place a person in long-term care is made, not by the assessing team, but by an allocation committee of four to six professionals who study the dossier (very large) but never see the patient. This system is slow, expensive, and rigid. A recent trial that ran 'dummy' dossiers through various allocation committees found great diversity between the groups in allocating services--that is, the process was not reliable. Following exposure to this system Professor Williamson was inspired to write "it [geriatric assessment] cannot be achieved by professionals sending reports (however detailed) to a committee or panel which then makes a vicarious sort of assessment (a method favoured in some parts of North America)." These committees were no better at determining levels of priority. Given comprehensive and co-ordinated geriatric assessment, an elaborate bureaucracy such as this becomes a redundant obstacle.

Case co-ordination (case management) A recent document from Health and Welfare Canada, "Assessment and Placement for Adult Long-term Care: A Single-Entry Model", recommends that a case co-ordinator participate actively in the screening and

assessment of the elderly patient and be responsible for obtaining services for that patient. The authors are wisely vague about who this person is or where she fits into the spectrum of geriatric services. Does she exist in a separate agency, is she integrated into the hospital-based geriatric service, or is she based with the home care team?

My experience with the first choice is entirely negative; that person is not where the action is, has little sense of urgency, and, to repeat Williamson, is "working in isolation." Better that the case co-ordinator be part of the action as a member of the geriatric team, the home care team, or both. The concept is important and should be pursued in future discussions and research.

Sectorization Bureaucracy, separate from the assessment and care process, flourishes where the population served is large and diverse and geriatric services poorly co-ordinated. Dividing the population into manageable units has many advantages. Caregivers know their population and can apportion services according to local need. Responsibility for providing assessment and other services is clearly defined. 'Dumping' of 'unattractive' patients is made difficult. Care providers at all levels of the geriatric services get to know each other and can communicate by telephone or with simple forms rather than by massive

irrelevant biographies. The system can respond rapidly when necessary. Along with decentralization of responsibility must go decentralization of authority to set priorities in the use of resources. As the Health and Welfare document emphasizes, attaining a balance requires the collaboration of providers of geriatric services at all levels.

SUMMARY

Geriatric assessment in its broadest sense is an approach to the problems of the elderly that, through prevention, planning and adaptation, aims to optimize the independence of the individual as she or he ages. If the older individual's vigour and independence begin to decline, comprehensive assessment of that individual may require the skills and organization of an interdisciplinary geriatric team. The team, having assessed, then ensures that the individual receives a co-ordinated comprehensive program of treatment, rehabilitation, primary care and other services as appropriate. There is growing evidence that this approach benefits the individual and that, in the long run, may lead to efficiencies and economies in the health care system. However, the geriatric assessment, as now practised, is far from perfect; much work is needed to refine the intervention and to integrate it fully into the continuum for care for the elderly.

THE TYPICAL GERIATRIC ASSESSMENT UNIT

by

Dr. Christopher Patterson

March 1989
National Advisory Council on Aging

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I. INTRODUCTION

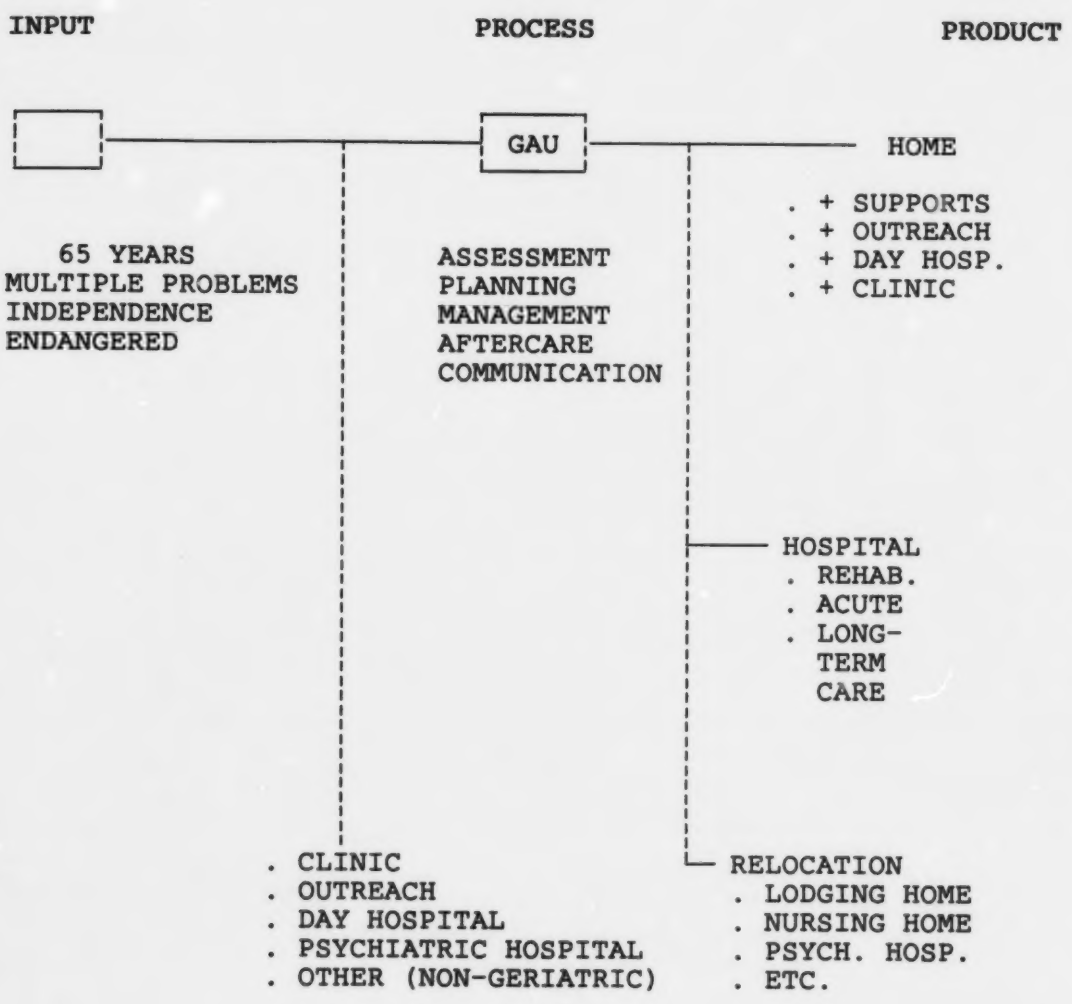
Geriatric assessment units have developed over the last 20 years in order to improve the diagnostic process and comprehensive assessment of older individuals suffering from complex health problems and requiring in-patient hospital care. Management principles include bringing to bear the special skills of a wide range of health care professionals, all carrying out their assessment of the individual. A conceptual model of the geriatric assessment unit is shown in Figure 1. When these professionals are brought together in an interdisciplinary team, the management strategies that have evolved have been demonstrated to be more effective than traditional medical management. Improvements in outcome have included reduced mortality, better physical performance, improved mood and more appropriate discharge arrangements, without an increase in direct health care costs.

The geriatric assessment unit (GAU) is seen as an essential component of the array of services for the elderly that should be available in all regions across Canada. In addition to improving clinical outcome, geriatric assessment units serve as a focus for education and, in academic settings an appropriate location, for evaluation of services and other clinical and basic research. This paper outlines

the features of a typical GAU, giving examples from several well established GAUs across Canada.

FIGURE 1

GAU CONCEPTUAL MODEL



II. PROGRAM ORGANIZATION

1. Staff

(a) Structure, staffing and roles: The interdisciplinary team is an essential part of geriatric management. The team in the typical GAU contains a core of professionals and a wider group of support professionals and consultants. The core team consists of physician, nurse, physiotherapist, occupational therapist and social worker. The team is typically led by a geriatrician, although increasingly the case management model is being used, where any one of the team members co-ordinates the assessment and management of a patient. The team meets regularly to discuss clinical cases, and usually also for program development. Although each team member has a particular set of skills, the effective team must recognize the boundaries of each professional and allow some blurring of their roles to ensure effective team function.

In addition to the core or nucleus team, a wider range of professionals is available for consultation. In some cases the disciplines of pharmacy, clinical nutrition, speech/language pathology and clinical psychology are part of the core team. More usually, however, these disciplines,

together with others listed in Table 1, are available as necessary.

TABLE 1

GERIATRIC ASSESSMENT UNIT RESOURCES

A.	**NUCLEUS TEAM**	. PHYSICIAN (GERIATRICIAN) . NURSING . PHYSIOTHERAPY . OCCUPATIONAL THERAPY . SOCIAL WORK
B.	**EXTENDED TEAM**	. AUDIOLOGY . CHAPLAINCY . CHIROPODY . CLINICAL NUTRITION . CLINICAL PSYCHOLOGY . DENTISTRY . OPHTHALMOLOGY . OTHER MEDICAL/SURGICAL CONSULTANTS . PHARMACY . PROSTHETICS AND/OR ORTHOTICS . PSYCHIATRY . SPEECH/LANGUAGE PATHOLOGY . VOLUNTEER SERVICES
C.	**SUPPORT SERVICES**	. LABORATORY . DIAGNOSTIC IMAGING (X-RAY, ULTRA SOUND, NUCLEAR MEDICINE) . LIBRARY . OTHER ACUTE HOSPITAL SERVICES

As the GAU acts as a secondary or tertiary care facility, close liaison with the patient's primary care physician is essential. In the typical unit the family physician is encouraged to continue in his/her role and is

invited to team meetings. Philosophically the patient and his or her relatives/caregivers are considered part of the team.

(b) Medical director and management unit: The medical director is typically a geriatrician, a qualified physician who has taken a period of approved training in the health care of the elderly and who has experience in that field. A specialist in geriatric medicine is a geriatrician who is a qualified internist, has taken additional approved training in geriatric medicine, and has met the standards of the Royal College of Physicians and Surgeons of Canada for certification in geriatric medicine.

Although in some locations the role of medical director may be fulfilled by another physician with training and expertise in the care of the elderly, the position is ideally suited to a geriatrician. The medical director is responsible for the overall quality of care and increasingly works with the nurse manager and designated hospital administrator in a hospital unit to oversee planning and policy, procedures, program development and evaluation.

2. Policies

(a) Admission: Admission policies vary somewhat from unit to unit, but usually entry to the unit is decided by the unit director in consultation with other members of the interdisciplinary team. Ideally, geriatric assessment units should have priority access to other components of a geriatric service. For example, should the patient be found to require prolonged rehabilitation, access to a rehabilitation unit within a reasonable time is desirable. In cases where the number of assessment beds is limited, or where prompt transfer to other geriatric services is not available (particularly continuing care facilities), then an agreement may be made in advance of admission to return the individual to pre-admission location at the conclusion of the assessment process to await transfer to continuing care. Admission criteria vary somewhat but frequently include those listed in Table 2.

TABLE 2

ADMISSION CRITERIA

The patient will:

(A) Be referred by a physician to a geriatrician

(B) Be at least 65 years of age

(C) Reside within the municipal jurisdiction

(D) Require in-patient admission to an acute care hospital

(E) Have complex health problems

(F) Have potential for improvement

(G) Require intervention from the interdisciplinary team

(H) Have a discharge location arranged before admission

(b) Access to Unit: Access to a geriatric assessment unit is typically permitted only by referral from a physician. Access may be gained by referral from other components of the hospital's geriatric program, by referral from a community physician, or by referral from other treatment units of the parent or other hospital. Referral may be prompted by community agencies or relatives, but with rare exceptions, a physician's referral is required.

(c) Discharge: Discharge criteria vary from unit to unit but generally apply when the assessment and management

plans have been completed. Typical discharge criteria are shown in Table 3.

TABLE 3

DISCHARGE CRITERIA

The patient will be discharged when:

(A) Appropriate discharge follow-up plans have been made

(B) Assessment, diagnosis and management plans for the patient's health problems have been completed

(C) The goals of the management plan have been achieved or have become unattainable because:

1. The patient's medical condition warrants more treatment than can be provided;

2. The patient does not require the comprehensive services provided;

3. The patient is unwilling to participate in established treatment or management program.

3. Procedures

(a) Assessment: Each member of the health care team carries out an individual assessment of the patient. This may commence at admission, or some parts of it may precede entry to the unit. The major domains of assessment are

(a) medical;

(b) functional;

(c) mental;

(d) psycho-social.

Most patients have the major part of the assessment completed within one week of admission to the unit. Where consultation is required from additional members of the health care team or where complicated diagnostic procedures are necessary, parts of the assessment may be delayed.

Assessments are often quantified using standard instruments for measuring the physical, cognitive and behavioural domains.

(b) Planning: The interprofessional team meets regularly, usually weekly. At this time some or all of the patients are discussed, and each team member contributes information so that a comprehensive picture of each individual patient is formed. In some cases it is necessary to meet with family members, health care workers from the community and others to complete this planning function. Out of the team meeting is developed a management plan. Regular review of the patient's progress is included in the weekly planning meetings. Tentative or definite plans for discharge are included.

(c) Management: After the management plan is devised, it is implemented by individual and group therapy. Individual therapy may include pharmacological interventions, physical measures, behavioural modification and patient education. Group therapy frequently includes reality orientation, communication and activity groups.

(d) Aftercare: When management is under way and a strategy for continuing management is evolved, the discharge plan is completed in conjunction with the interdisciplinary team, patient, family and other caregivers. Discharge may occur to the patient's own home, in which case it is often necessary to include home care services as part of the aftercare plan. In some cases the patient will be discharged to a day hospital or to a rehabilitation or long-term care facility.

(e) Communication: An essential part of the process involves communication with referring health professionals nd those who will continue with aftercare plans. Communication methods include telephone contact, transfer of nursing care plans, physiotherapy plans, and a formal discharge summary. Communication of treatment instructions to the patient is often reinforced by giving the same instructions to family members or other caregivers.

III. RESOURCES

(a) Physical: Most geriatric assessment units do not occupy facilities built for the purpose but have been developed by modifying existing hospital facilities. Generally they are located in acute care facilities where there is access to comprehensive diagnostic and therapeutic facilities.

(b) Beds: The size of units varies. Most units are between 20 and 25 beds. This appears to be the most convenient size for administrative reasons, as therapeutic staffing ratios are most easily organized around this number or multiples thereof. Some units are very much larger; this usually occurs where there is no distinction between assessment and rehabilitation beds. Federal regulations stipulate an area of eleven square metres for each bed allocation, and most units contain a mixture of single, double and multiple-bed rooms. A mix of one- and two-bed rooms is considered ideal.

(c) Other Space: An activity area is an essential part of the geriatric assessment unit. Federal regulations suggest a minimum of 3.7 square metres per patient, although this is not always achieved in practice. The activity area is used

for group therapy, educational sessions, visiting with relatives, recreational activities, etc.

A dining area is considered essential to promote socialization in a more natural setting than that traditionally found in hospital environments. Patients are encouraged to eat lunch and dinner in the dining area. The area should allow 1.67 to 1.86 square metres of floor space per patient. Another area is set aside for individual physiotherapy and is equipped with parallel bars, mirrors and plinths.

A conference room of sufficient size to accommodate the multidisciplinary team is a feature of the typical geriatric unit. This may be part of the nursing station, although ideally it is in a separate location to minimize interruptions. The nursing station must have sufficient space to accommodate not only charting, preparation of medications and secretarial functions, but also sufficient space to promote the necessary discussions between members of the interdisciplinary team. Offices for staff, particularly the head nurse/nurse manager, are located in the assessment unit, and a number of other staff offices may also be present. A room for treatment and examinations (for

procedures such as sigmoidoscopy, dressing changes) is available in most units.

A quiet room is required for private interviews with patients and families. Bathing facilities should emphasize accessibility for patients with mobility problems. A kitchen suitable for assessing activities of daily living is a desirable feature and is present in most typical geriatric assessment units.

(d) Personnel: Table 4 shows typical staffing ratios of three geriatric assessment units. Table 1 shows a more complete list of staff for both nucleus and extended team membership.

TABLE 4

TYPICAL STAFFING OF THREE GERIATRIC ASSESSMENT UNITS

G.A.U.	1	2	3
Bed Complement	20	18	18
Nurse Manager	2	1	1
Nurse:Patient	1:4	1:4	1:4
Occupational Therapist (OT)	1	2*	2+
OT Assistant	0	1*	0
Physiotherapist (PT)	1	1	1+
PT Assistant	.5	0	0
Recreation Therapist	0	0	0
Therapy Assistant	0	0	1+
Clinical Psychologist	0	0	0
Pharmacy	.5	.5	0
Speech/Language Therapist	.4	.5	0
Clinical Nutritionist	.5	.5*	0

* shared with 10-15 day hospital places

\+ shared with 11 day hospital places

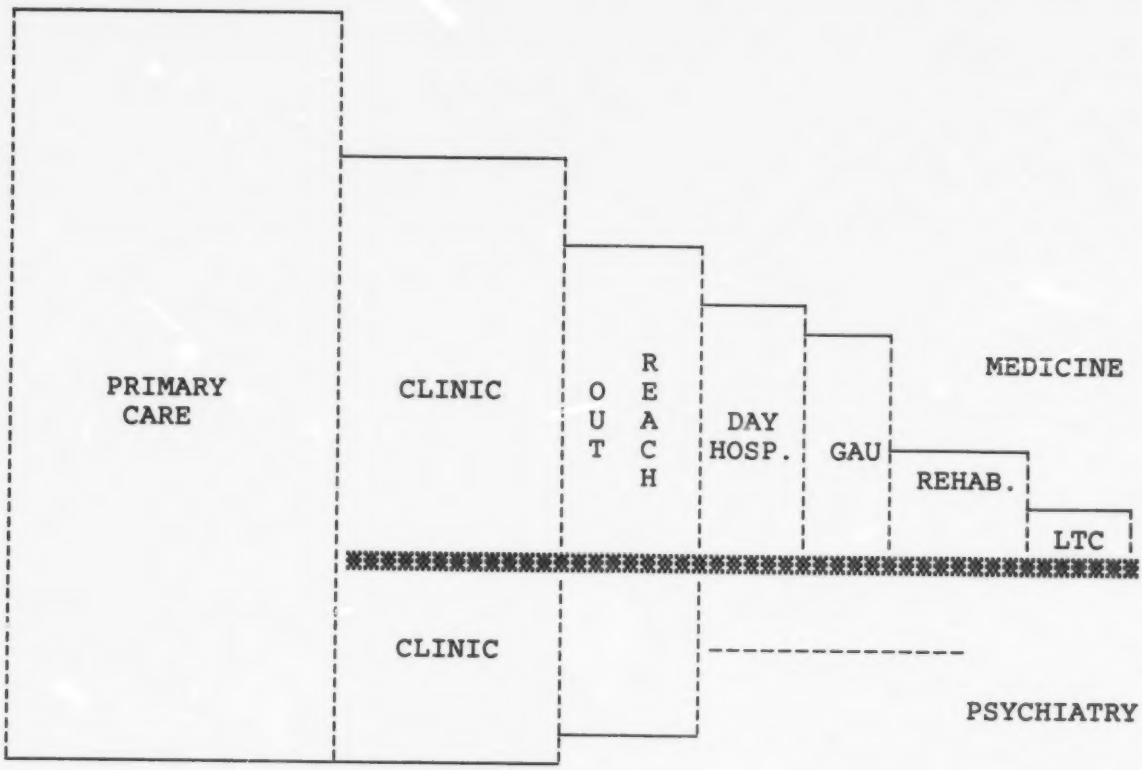
IV. INTEGRATION

(a) Local: The typical geriatric assessment unit must be seen not in isolation but as part of the spectrum of geriatric services. Research has proven that the linkage between assessment and rehabilitation is vital to a successful outcome for the geriatric patient. Perhaps the ideal situation is where assessment and rehabilitation facilities are adjacent, interconnected, or shared. In other cases, linkage with rehabilitation is by priority access.

The GAU must relate to other components within the parent hospital, including a consultation service, a day hospital, community outreach program and long-term care facility. It is possible to move between these programs as necessary, with information sharing allowing the assessment carried out in one program to be incorporated in the assessment and management of the subsequent program. An outline of the spectrum of services is shown in Figure 2.

FIGURE 2

THE SPECTRUM OF GERIATRIC SERVICES



Team members from the GAU typically act as consultants to other areas within the parent hospital. In some cases this consultation team is organized formally, so that a consultation request will prompt interdisciplinary assessment and recommendations.

A relationship must also exist with other treatment units of the hospital. For example, if a person admitted to the geriatric assessment unit becomes acutely ill, then transfer to a higher intensity facility (e.g., an intensive care unit) should be readily available. Other frequently used services include orthopedic and urological surgery, rehabilitation and psychiatry.

The GAU must also be integrated with community facilities. Most units develop a network with community agencies such as public health nursing, home care nursing and long-term care facilities. Increasingly, home visiting and outreach services help to delay or avert the need for hospital admission.

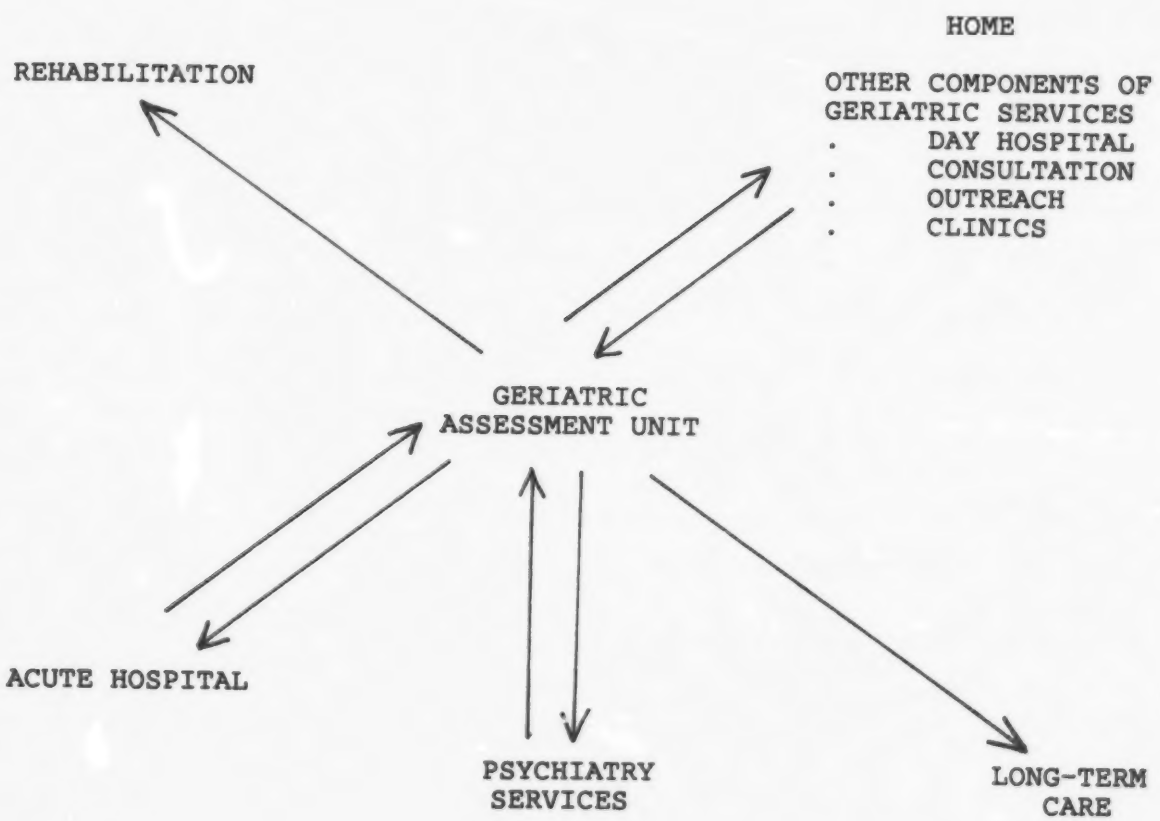
(b) Regional: A relationship must exist within the health care region to provide secondary and tertiary care for the population served by agencies other than the parent hospital.

Depending on the size of the health region, there may need to be more than one geriatric assessment unit. Although the typical GAU has developed as an unique service within a health region, it is likely that a range of primary and secondary care services will be duplicated in large urban health regions, although highly specialized tertiary care services will remain as uniquely represented within health regions. Various models for regional co-ordination are being developed.

Relationships with other services are shown in Figure 3.

(c) Evaluation: Evaluation of the geriatric assessment unit and other programs is carried out using traditional procedures such as audit and quality assurance. In addition, many geriatric assessment units reside in academic institutions, and formal evaluation studies have been or are being carried out.

FIGURE 3



(d) Education: The geriatric team has a responsibility to educate other health care professionals in the parent hospital. Education of patients, volunteers and patient advocacy groups is frequently carried out by GAU personnel. As many GAUs exist in an academic environment, education at undergraduate, postgraduate and post-professional levels is frequently part of their mandate.

V. SUMMARY

The geriatric assessment unit has developed as a focus for diagnostic and therapeutic planning for elderly people with complex health care and social needs and is seen as an essential component of services for the elderly. Many of the functions of the geriatric assessment unit can be carried out in other settings, but the concentration of resources in the acute care hospital enables the GAU in this setting to be a highly effective model of geriatric care and an excellent focus for educational and research activities.

VI. FURTHER READING

1. Clinics in Geriatric Medicine, Vol. 3, No. 1, 1987 (This volume devoted to geriatric assessment).

2. Guidelines for establishing standards for Geriatric Services in acute care hospitals: Geriatric Assessment and Treatment Units, Geriatric Day Hospitals, National Health and Welfare, 1977.

3. Rubenstein, L.Z., Josephson, K.R., Wieland, G.D., et al. Effectiveness of a Geriatric Evaluation Unit: A randomized clinical trial. N. Engl. J. Med., 1984: 311;1664-70.

A BROADER APPROACH TO GERIATRIC ASSESSMENT

by

Dr. James L. Kirkland

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National Advisory Council on Aging

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INTRODUCTION

Ideally, geriatric units should function in the context of a larger system. This system includes acute and rehabilitation in-patient units, home and in-patient consultation teams, out-patient clinics, and day hospital programs. Other services and policies should also be in place, especially in the acute care hospital. These include generalized training programs in geriatrics for all acute hospital staff, development of appropriate policies in acute hospitals (about issues such as restraints, wandering, and so forth), emergency room reforms, changes in the purchasing department and other departments.

The objective of the geriatric services in acute hospitals, and indeed throughout the community and in other types of institutions, has to be to try to get people home if at all possible and to try to maintain the independence of elderly patients. In Canada, we have too high a proportion of people over the age of 65 years in long-term institutions compared to other developed countries. Most elderly individuals clearly want to remain at home. This means that the rate of patient turnover in geriatric services may not be as good a measure of their success as their ability to return people to their homes. The latter may be the best outcome measure in the evaluation of geriatric programs. We need to take the steps throughout the health care system to try and

encourage rehabilitation and discourage the warehousing of elderly individuals that is now occurring in this country.

MULTIDISCIPLINARY IN-PATIENT CONSULTATION TEAMS

The first component of the ideal comprehensive geriatric program is the consultation team. The value of such teams is a subject of controversy. Dr. Roy Fox and his collaborators in Halifax and Dr. David Gayton in Montreal have published studies in this area. Dr. Gayton studied the effectiveness of a consultation team consisting of two geriatricians, a clinical nurse specialist, a physiotherapist, and an occupational therapist. Social workers from other units were involved in the team, but the team did not have a social worker.

There was a 35 per cent decrease in mortality in patients who were seen by this team compared to control patients. The results did not achieve statistical significance, but were very close to it. In this particular study, the patients who were seen by the team were not targeted. Most patients over the age of 70 who were admitted to two of the general medical units were seen by this team. If a particular sub-group of patients had been targeted, the effectiveness of the team might have been more apparent. Additionally, a spill-over effect for house staff on the

control of units might have diluted the perceived effectiveness of the team.

Compliance with recommendations is also an issue with consultation teams. The effectiveness of a consultation team depends upon how compliant the referring physicians and other staff are with the recommendations the team makes. This is less of an issue in an in-patient unit where the staff on the unit has control over therapeutic decisions. For a consultation team to be successful, all hospital staff need to be educated about some of the principles of geriatrics so as to improve compliance and the effectiveness of the team. The team can assist in this educational process, not only by working miracles with individual patients, but also by being present at unit conferences about patients and by helping to develop teaching programs. We have found it useful to identify two interested nurses from every unit of the hospital who then receive additional training in geriatrics. The consultation team can give presentations at grand rounds and other teaching sessions for the rest of the hospital.

Consultation teams have to operate in the context of other approaches for improving care of the elderly. They need to be selective in accepting referrals in the same way as in-patient units have to target patients. In a large hospital, the type of patients who benefit most are frail,

elderly individuals with multiple problems on units where the referring staff is likely to co-operate with the team. On units where the staff is not co-operative, sometimes the only recourse is to transfer patients to an in-patient geriatric unit. It is useful if the team has some control over admission from the rest of the hospital to the acute unit, the geriatric rehabilitation unit, and to long-term care beds. This is a very useful carrot in persuading staff who make referrals to carry out some of the recommendations made by the consultation team.

In addition, the team needs to have some capacity to carry out the recommendations it makes. It needs a specialized physiotherapist, a specialized occupational therapist, a specialized nurse, and a specialized social worker who can do things that their peers cannot do or do not have the training to do. Our team consists of a geriatrician, a geriatric psychiatrist, a rehabilitation medicine specialist, a clinical nurse specialist in geriatrics, a physiotherapist, an occupational therapist, and a social worker, all of whom have special training in geriatrics. We are studying the team's effectiveness at the moment, but we have not completed rigorous studies of it yet.

Informally, we have found that this team is quite successful in facilitating discharges home. The team has helped to reduce the number of patients waiting in the Toronto General Hospital for long-term care by 23 per cent. However, this reduction occurred in the context of many other changes that took place in the same period.

DAY HOSPITALS

The purposes of day hospitals are to conduct investigations, to provide rehabilitation and treatment, and to give maintenance care that may otherwise have necessitated a hospital admission. The average length of stay in day hospitals in Canada is quite variable. Length of stay ranges from weeks to months, depending on the objectives of the day hospital. Day hospitals can be affiliated with acute hospitals if the main focus is on investigation, especially investigation requiring access to complex diagnostic equipment such as CAT Scanners. Day hospitals are sometimes in long-term care settings if the main focus is on rehabilitation and on less complex medical management, such as diabetes control or pressure sore treatment. Another use of day hospitals is to help in the transition to full home discharge of patients whose condition is quite marginal. When such patients are admitted to a day hospital for a month

or so as they are being discharged home, it seems that readmissions can be reduced.

MULTIDISCIPLINARY OUT-PATIENT CLINICS

There are several clinics around the country specializing in Alzheimer's and related disorders. There are also continence clinics, osteoporosis clinics and other types of multidisciplinary clinics. These clinics can be more effective than other kinds of out-patient follow-up in the case of elderly individuals with multiple problems; such clinics have been found effective in reducing hospital stays and in reducing hospital and long-term care institutional costs and requirements.

HOME VISITS

There may be a number of advantages of home visits by multidisciplinary teams based in acute hospitals or rehabilitation hospital geriatric units. Home visits can provide an option for frail, elderly individuals to remain at home. They can be a means of avoiding difficult and painful transportation. They can allow better social, environmental, and functional evaluations of the individual's requirements. They help to improve physician/patient relationships, as well as relationships between physicians and community agency

workers. They are useful in accident prevention. During home visits, patients can actually demonstrate which activities they can carry out. Home visits are a means of avoiding inappropriate admissions, especially when the patient is best directed to home care services or approaches other than admission to an in-patient unit. Home visits can be useful in reinforcing community workers' advice to the family. In other words, a second opinion can be provided during a home visit.

Home visits can be divided into four categories: preventive or maintenance visits; consultative or pre-admission visits; pre-discharge visits; and post-discharge visits. One could argue about which kinds of professional staff are needed for the various kinds of visits. Preventive visits are perhaps best done by the family physician or the public health nurse.

A regular program of preventive home visits for people over 75 years who were at risk resulted in significant reductions in mortality, hospital admissions, hospital bed days and emergency room visits compared to a control population in a Danish study reported in 1984. Another study reported in the British Medical Journal during the same year showed that preventive home visits, in this case performed by

the equivalent of a public health nurse, at regular intervals, can result in reductions in mortality.

The consultative or pre-admission home visit is more the purview of consultants working in geriatric units. These visits are useful to determine whether admission to an in-patient unit is the best option or whether other options can be thought of to assist the elderly individual. A study by Williamson and his group in Edinburgh, published in the British Medical Journal in 1980, reported outcomes of these types of visits. A number of factors were found that might not have been detected during out-patient visits, day hospital visits, or in-patient stays which could only be found by doing a home visit. One of the key findings was that 23 per cent of patients were taking drugs without the knowledge of the referring physician.

We have found that such visits are particularly useful in avoiding hospital admissions where there are alternatives. In fact, we were able to avoid admitting 75 per cent of patients referred to us by giving advice about alternative forms of rehabilitation or treatment available in the patient's own home.

Some advantages of pre-admission visits are, first, that unnecessary or inappropriate admissions can be avoided and

alternatives can be suggested. Secondly, the level of function required to live independently for that particular individual can be determined. By looking at a patient's home one can determine what level of function he or she will have to regain in order to return to that setting. One can also get an idea before admission about the extent of home modifications that might be necessary so that these can be started while the person is in hospital. The patient's routines, for example, the time the patient gets up or goes to bed, can be ascertained before the patient comes into the hospital.

We have performed about 300 of these visits and are in the process of examining their outcomes. A geriatrician goes on the visit and takes the patient's history and does the physical examination while either a nurse or a social worker finds out what the issues are from the family's perspective and does an examination of the house. Both parts of the visit take an hour to an hour and a half and are done concurrently. In a day hospital or an out-patient clinic it would take a number of hours to get the same amount of information. The visits are very much briefer if we determine that the person has to be admitted. One can often tell within a matter of minutes if a person has to be admitted.

Pre-discharge home visits can be performed by occupational therapists (who are often the most essential professionals for these visits) and also by physiotherapists, social workers, or nurses. We usually send a medical resident along as well for educational purposes. We find pre-discharge home visits are useful in determining the level of function that the person still has to attain before a realistic discharge can be made. These visits can be done a couple of weeks before a planned discharge so that the areas in which the patient requires further rehabilitation can be concentrated on in the last few weeks of the patient's stay.

Pre-discharge visits can be very helpful in convincing a patient or family that the patient has actually improved and that discharge home is actually possible. Alternatively, it may help convince hospital staff that the discharge may in fact not be realistic. In some cases these visits help to improve patients' motivation considerably. We found that during the week or so after these pre-discharge home visits patients tend to put more effort into their rehabilitation. Patients seen by the multidisciplinary in-patient consultation team, in the acute hospital in-patient unit, in the rehabilitation hospital geriatric unit, and elsewhere in the system often benefit from pre-discharge home visits.

Post-discharge home visits are done a week to two weeks after a person has been discharged from the acute hospital or geriatric rehabilitation unit. These visits are useful to determine whether the discharge was in fact realistic and likely to be durable, to check whether home modifications have been made, and to ensure that the community agencies and other services that we thought were going to be involved are in fact involved, because there can be communication problems.

Furthermore, these visits are useful to double-check on some safety, to ensure a smooth transition back to the care of the referring physician, and perhaps most important, to check patients' medications. It has been estimated that upwards of 40 per cent of acute hospital re-admissions of people over age 65 result from medication errors made in the period following discharge.

Home visits have some disadvantages. Those most commonly cited are time constraints, especially travel time and office disruption, and adverse financial implications. Some health care professionals cite difficulty in performing examinations in the home, and some cite lack of laboratory facilities as reasons for not wanting to do home visits. However, all of these disadvantages can be overcome. It often takes less time to determine a patient's problems and

what treatment is needed by doing a home visit than by seeing the patient in an out-patient department.

Time disadvantages can be minimized through efficient organization and by setting aside blocks of time for these visits, carefully arranging a series of visits along a route, and having family members present so that they can be questioned during the visit (this saves considerable time).

Financial disadvantages can be minimized through efficient organization, with reduction in office expenses and tax write-offs for expenses incurred during home visits. I think that reimbursements for physicians' time and expenses for home visits in most provinces really do need to be re-examined and made more realistic.

There are many advantages to seeing appropriately selected elderly patients in their homes. It is often easier to examine people in their homes because they tend to be more relaxed than in an out-patient department and information seems to be more readily available in the home. There are actually more laboratory tests that can be done in the home, at least in Toronto, than in a physician's office. Laboratory technicians can go to the patient's home and do blood work, ECGs, chest x-rays and other forms of x-rays, and ultra-sound examinations.

Home visits are particularly useful when people are at imminent risk of being admitted to long-term care, when consideration is being given to admission to an in-patient geriatric unit, in the case of individuals with burned-out caregivers, and for people with impaired mobility or with cognitive or psychiatric disorders that impede their transportation to physicians. We are able to detect elder abuse much more easily on a home visit than we are in the hospital setting; and we have detected elder abuse in about 10 per cent of our home visits. Alcohol abuse can be difficult to detect unless a home visit is performed. Home visits are also very useful in cases where there are suspected problems with drug compliance.

The opportunity to examine the house is one of the advantages of home visits over other approaches to investigation. Examination of the house can yield diagnostically useful information. For example, if a house is poorly kept, this might indicate that the patient has financial difficulties, problems with vision, a dementia or a mobility disorder. If the doors are locked and the home is dark, the patient may have paraphrenia. If alcohol abuse is a problem, there may be large quantities of alcohol in the home. If there is a smell of urine, incontinence may be a problem. Often patients do not reveal this problem to health care professionals. Dangerous drugs may be found

that may explain a patient's symptoms. If the house is kept very hot, the patient may have hypothyroidism. Examination of the house is an area of medicine that has not been subjected to much careful research. Home visits can also be therapeutically useful. On the initial visit advice about simple home modifications can be given, advice about other measures to improve home safety (such as discarding outdated medicine) can be given, and targets can be set for planning the amount of rehabilitation needed.

EFFECTS OF AN INTEGRATED APPROACH FOR ELDERLY PATIENTS WITH MULTIPLE PROBLEMS

A number of geriatric programs, including acute geriatric units, geriatric rehabilitation units, day hospitals, out-patient clinics and multidisciplinary consultation teams for in-patients and patients at home, have been established in Canada. Such integrated services have operated for many years in northern European countries and, more recently, in a few centres in the United States. Some outcomes from programs established at the Toronto General Hospital and the Queen Elizabeth Hospital (TGH-QEH service) will be reviewed as an example of the effects of providing an integrated array of services for those elderly patients with multiple health and social problems.

Initially, patients are seen in their homes by a pre-admission consultation team or by a multidisciplinary consultation team if the patients are in an acute hospital. Where possible, measures other than admission to the geriatric unit are tried first. Only 25 per cent of patients seen on pre-admission home visits ultimately have to be admitted. Patients who are not admitted to the geriatric unit may be referred to the day hospital or an out-patient clinic for rehabilitation and treatment, or advice may be given to referring physicians and community agencies about managing patients without admitting them.

Patients who require admission are usually admitted first to the unit in the acute hospital, where they undergo medical investigations and initiation of treatment. Surgical consultation, blood transfusions, or other medical procedures and investigations are done in the acute hospital setting. Then patients are transferred across the street to the geriatric rehabilitation unit in the chronic care hospital, where intensive physiotherapy, occupational therapy, and social work interventions continue. Self-care apartments are used to teach the family and the patient measures to retain the patient's independence. Pre-discharge and post-discharge visits are performed.

We need about seven geriatric rehabilitation beds for every two acute geriatric unit beds to keep the system flowing properly. The average age of the patients has been 82.5 years, and their main problems have been confusion, incontinence, immobility and falling. We try to send people home where possible; if not we admit them to the most appropriate level of long-term care. We have found that about 70 per cent of patients can return home, 6 per cent have died, 9 per cent have been admitted to homes for the aged and nursing homes and 15 per cent to chronic hospitals.

Around 75 per cent of patients have been able to return home or to a lower level of care that anticipated before our intervention. Almost 2/3 of the people who were listed for admission to a chronic hospital (at 3 1/2 hours of nursing care per day) were able to return home. We followed those people who were destined for admission to chronic hospital before our intervention, for up to 28 months after discharge. Sixty of these patients with an average age of 82.5 years were followed. Their capacity to remain in their own homes has been roughly equivalent to an age-matched population who had not been considered for admission to long-term care. Hence, some of the interventions possible through an integrated geriatric service can have a lasting influence. This also demonstrates that predictions that rehabilitation or treatment will be futile are often fallible. A

therapeutic trial of rehabilitation is often warranted, especially if a long-term admission is being considered. All components of geriatric programs need to be focused on rehabilitation and treatment, rather than simply on assessment and placement.

CONCLUSION

There must be much more to acute hospital geriatric units or geriatric rehabilitation units than the units themselves. Such units need to operate in the context of a broader approach. Staff from in-patient units can also be involved in consultation teams, home visit teams, clinics, and day hospitals. If staffing levels are adequate, staff can also help the hospital administration in formulating policies, developing community links, and so forth. There is more to staffing a geriatric unit than simply providing staff for direct care. Provincial governments need to realize that this indirect care component requires additional staffing over and above the usual level of acute or rehabilitation hospital staffing. It is a good idea to rotate staff through the various components of a geriatric service and to rotate staff from the rest of an acute hospital through the geriatric service.

Through a combination of approaches, it is possible to send home a large proportion of people who otherwise would have met the standard eligibility criteria for long-term care. Perhaps all patients being considered for admission to long-term care should undergo a trial of rehabilitation and treatment in a geriatric service. It is very difficult to predict which patients will benefit from a trial of rehabilitation; there needs to be more research in this area.

In Ontario, the decision to admit someone to long-term care costs $200,000. It costs $60,000 per year for a chronic hospital bed, and the average length of stay is just over 3 years. It costs $30,000 per year for nursing home beds, and the average length of stay is around 7 years. The decision to admit a patient to long-term care costs three times as much as a heart transplant. Additionally, the decision has a huge impact on the patient's well-being. It is extremely difficult to predict who will benefit from a trial of rehabilitation, and a significant proportion of elderly patients who are felt to require long-term admissions can be rehabilitated and sent home. Hence, it makes sense to institute a trial of rehabilitation before considering admission to long-term care in most cases.

GERIATRIC ASSESSMENT TOOLS

by

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National Advisory Council on Aging

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PROBLEMS OF ASSESSING THE ELDERLY

The number of seniors in Canada is growing with extraordinary rapidity. Aging is commonly associated with reduced functional reserves in a variety of organs and systems. A significant proportion of seniors unfortunately also suffer from multiple illness, significant disability, and dependency. Acute illness occurring in a senior with a background of chronic disorders may result in decompensation of several vulnerable systems, resulting in a complex clinical picture. Multiple medication use is unfortunately common and may both precipitate illness and/or modify its presentation.

Certain generalizations about differences in disease presentation by seniors include the following:

i) A greater complexity of medical problems tends to be found, and the individual is often vulnerable to further decline or superadded illness.

ii) Illness is often seen with atypical and obscure presentations. Such presentations often include changes in cognition, affect, continence, falls and functional deficits.

iii) Seniors are especially vulnerable to iatrogenesis.

iv) Environmental and social factors are critical in determining the type and timing of clinical presentation.

COMPONENTS OF THE GERIATRIC ASSESSMENT

The nature and composition of a geriatric assessment varies with the goals of each assessment. At times the assessment will be aimed at collecting baseline data, for example, in the assessment of suitability for an institution. In such instances a detailed standardized multidimensional assessment would likely be required, which would tend to look at function and behaviour rather than diagnosis. At other times the assessment may be directed to influencing clinical decisions. In this instance shorter, more focused assessments may be used, for example, use of a depression inventory.

The assessment, not uncommonly, commences with a case finding approach using screening instruments and techniques. Based on these initial findings more detailed assessment is frequently undertaken. The in-depth assessment often requires the participation of a number of professions, including nursing, audiology, pharmacology, psychology, dentistry, dietetics, physiotherapy, occupational therapy,

speech pathology, etc.

A general assessment of physical health is almost universal to the geriatric assessment. In addition to those features relating to the acute illness, an attempt is made to assess the background in which it occurs. Particular attention is often paid to the use of prescription and non-prescription medication, nutritional history, alcohol consumption, and previous presence of falls, incontinence and immobility. Attempts are commonly made to determine the patient's previous personal strengths, values, perceived quality of life, financial status, and anticipated outcomes from his or her health care. The physical examination is necessarily comprehensive, but special attention is paid to visual or hearing impairments; deficits of language, cognition and mood; nutritional status; and conditions contributing to falling and difficulty in ambulation.

Under mental health, the patient's cognitive, behavioural and emotional status are evaluated. Commonly such assessments are directed to delineating depression, delirium, and dementia. Necessarily some objectivity is needed for such assessments.

The measurement of functional status forms an important part of the assessment. Physical functioning usually refers

to the ability of the individual to carry out basic activities of daily living (ADL), which include bathing, grooming, dressing, feeding, toileting, transfers, and continence. Other components of functional well-being are behavioural, requiring a high level of cognition and judgement, and these may also be assessed. They are usually referred to as the instrumental activities of daily living (IADL) and include preparation of meals, shopping, housework, financial management, medication management, use of transport and use of the phone. Usually numerical scales are used for each component of the ADL or IADL scale in an attempt to quantify the degree of independence or disability in function.

The individual's social support network needs to be examined in terms of domicile type, domicile sharers and support systems. It is important to seek confirmatory data from present and potential caregivers and to assess their competence, willingness to provide care, and acceptability to the older person. This information has to be placed in the context of a patient's physical environment. A home visit will often be of value, for example, in identifying potential hazards such as inappropriate lighting, slippery surfaces, cluttered furniture, etc. Attempts are commonly made to assess the quality of life enjoyment of the senior and potential stress on the caregiver.

A major problem for geriatric assessment services are decisions about whom to assess and where and when to conduct such assessments. Geriatric assessment services are at present a relatively scarce resource and need to be used in the optimal manner. One approach is to focus on specific problem areas such as acute hospitalization for seniors.

Admission to hospital is a traumatic event at any age, but many surveys have observed that seniors do less well than other groups, with higher mortality rates, longer lengths of stay, risks of decline in independence and high subsequent rates of institutionalization. Seniors admitted to hospital might be suggested as a target group for geriatric assessment and treatment. Seniors commonly account for nearly half of all hospitalizations, however, and it would be unrealistic to suggest that a geriatrician should see every senior admitted to hospital. Fortunately it appears that only a minority of seniors are at particular risk of suffering negative effects of hospitalization. Thus in a population of 63,000 seniors, approximately 6,000 will account for more than 50 per cent of all acute bed days. It therefore becomes more realistic to suggest that geriatric services might be able to play some significant part in assessing such individuals and guiding their management.

The crucial question then becomes how to identify high-risk users before they suffer the negative effects of hospitalization. Certain characteristics of such individuals have frequently been described. These include age over 75 years, female sex, living alone or in an institution, previous hospitalizations, multiple diagnoses and medications, and presence of falls, immobility and confusion. It seems reasonable to suggest, therefore, that such criteria could be included in a focused screening instrument to identify seniors likely to benefit from a comprehensive geriatric assessment.

This profile of the high-risk patient is just one of the reasons for the increasing interest in the use of reproducible, standardized, structured assessment instruments. More generally the purposes of such a standardized approach would be:

1. To attempt to ensure consistency in assessments. Individuals may vary in their technical knowledge and experiences, which may introduce biases in their subjective assessments. The use of a consistently applied scale with good reliability among observers would minimize such biases.

2. To improve or direct diagnostic attempts. Sometimes

assessors are concerned that important areas such as sensory assessment, nutritional status, economic resources and living circumstances are being overlooked. A structured assessment avoids this and may be used as a 'screen' for more detailed assessment of problem areas. In other instances illness may manifest non-specifically as increasing dependency, which if sub-acute may be falsely attributed to 'aging'. A structured screening assessment may reveal inconsistent patterns and direct attention to the appropriate problem areas.

3. To predict outcomes. In situations of scant resources, attempts are sometimes made to detect individuals most likely to benefit from such resources. This may be particularly relevant when one offers several different types of treatment programs tailored to different needs.

4. To monitor clinical change over time and thereby guide the selection of further assessments or interventions to restore or preserve health. Many treatment programs for seniors need to be individualized both initially and over a period of time. Sequential objective measurements make possible the evaluation of individual components of the treatment as adjustments are made.

5. To recommend appropriate placement or discharge

planning. The objective measurement of the individual's functions at a time when he/she is stable may make possible a more accurate prediction of his/her support needs. The assessment may also indicate remedial elements that, when treated, may reduce the need for institutionalization.

6. In certain instances the data from assessment may form the basis for planning new programs and anticipating manpower needs.

7. The process of introducing formal assessment can provide a focus for teaching models and discussions on policy modification. Communication and understanding between assessors of different backgrounds can be greatly facilitated by use of common assessment methods.

CHOOSING AN ASSESSMENT INSTRUMENT

In choosing an assessment instrument it is of primary importance that the purpose of using the instrument be carefully delineated. It does not, for example, make sense to use a multidimensional instrument collecting data on social supports and emotional status if the primary question relates to the impact of a rehabilitation program on a specific measure of physical function in a limb. If the

intent is to assess discharge planning needs, however, such information becomes highly relevant.

Once the goals are clarified it is critical to review carefully the information on instruments that have been used in populations similar to the one to be studied. If an instrument has been developed and validated in one population but is to be used in quite a different group, its validity in this situation may be suspect. Instruments developed for use in young populations cannot be applied blindly to senior populations without risking some problems of interpretation. Cultural and language differences make for obvious difficulties in even extrapolating between populations of similar age composition.

A related issue concerns the clinical setting in which the instrument will be used. Time and space constraints may limit what can be accomplished. A multidimensional assessment, which may require some 40 minutes to complete, may be inappropriate for ill or frail seniors. Instruments that are self-administered and can be completed in a few minutes have obvious advantages in this context.

For the elderly patient, acceptance of assessment is often related to the time required and the complexity of the questions or actions measured. As a general rule,

assessments that require more than an hour of testing at a time are met with increasing resistance, and the quality of data begins to decline. There is also a need for the raters to see some relevance in the assessment. Staff who apply an instrument half-heartedly commonly achieve less success relative to enthusiastic staff.

The choice of rater or mode of administration can also affect the results obtained. The rater may, without realizing it, by applying prompts or cues that introduce bias into the answers. It is therefore necessary to attempt to maintain consistency of rating throughout a study or individual evaluation. It is recognized, for example, that a patient's self-rating of ability is often higher than that of a nurse, while families often rate lower still than the nurse. The reason for such discrepancy is perhaps the natural desire of the senior to return home, resulting in optimistic colouring of their reporting. The family, having concerns about the vulnerability of their aged relative, may err in the opposite direction.

In deciding about appropriate instruments for clinical use the clinician has to take all these points into account. The clinician is often faced with the choice of using one multidimensional assessment instrument or a collection of several smaller instruments.

Multidimensional instruments offer the advantage of collecting potentially important information in a number of areas using a standardized instrument. Unfortunately, such instruments are often derived for use in one population for a specific purpose. They tend to be inflexible because modifying or depleting variables may affect their validity, particularly in the case of any summary rating scores. The user is therefore often committed to collecting a large battery of information on each patient interviewed. Such instruments also often imply extensive staff training in their application. They tend to be more useful in the stable situation where perhaps a placement decision is required.

In general, targeted shorter instruments, such as mental status questionnaires and ADL scales, tend to have the greatest utility in fluctuating clinical settings. Such scales often have greater clinical validity and are more readily accepted and recognized by clinical staff. In addition, administration of shorter instruments may be structured more easily to the needs of the frail elderly patient. Training is often simpler and appropriate to a wider range of potential assessors. Self-rating scales could be also considered under this category, and their ease of application makes them attractive. Obviously their use is limited in cases of impaired communication or confusion.

It is apparent therefore that a single instrument is unlikely to meet all the needs of a geriatric assessment. A variety of factors will influence the type of instrument used, including the characteristics of the group of seniors being assessed, their social networks, the site of the assessment and the goal of the assessment. Certainly an early goal of geriatric assessments should be to identify unmet needs and respond with appropriate further assessments and treatments to optimize function. It seems reasonable, to suggest therefore, that some priority be given within the geriatric assessment to instruments that include a screening function, which can then be used to direct more detailed assessments.

The desirable characteristics of an instrument to be considered as a screening tool for geriatric assessment are as follows:

1. The instrument should be widely recognized and have been applied to geriatric groups, ideally in a variety of settings. There should be available reliability and validity data for these various settings for geriatric populations.

2. The instrument should be able to discriminate between conditions that may otherwise be confused with one

another. It should also be sensitive to changing severity of the problem over time.

3. The instrument should have clinical relevance to a geriatric practice.

4. The instrument should be acceptable to both client and staff.

5. The instrument should be short and as concise as possible to facilitate its application and enhance its acceptability.

6. Ideally, the instrument should be capable of administration by a variety of individuals with standardized training available.

7. In view of the richness of the Canadian culture it is desirable that the instrument should have been applied to multiple cultures and available in at least the two official languages.

8. Instruments should ideally lend themselves to a hierarchical approach and direct the client to relevant further assessments and treatments.

9. The use of numerical ratings on instruments is desirable to facilitate analysis.

RECOMMENDATIONS ON SPECIFIC SCREENING ASSESSMENT TOOLS IN GERIATRICS

Accepting that no one instrument can provide the diversity of assessment to cover all areas of geriatric assessment and yet maintain these desirable characteristics, it is necessary to use several such tools within a geriatric assessment. It seems reasonable to consider assessment tools under the headings of cognition, depression, activities of daily living, behavioural assessment, and quality of life.

Based on our review of a number of short mental status assessment instruments, either the Mini-Mental State Examination of Folstein or the Short Portable Mental Status Questionnaire can be recommended as instruments to consider. The Mini-Mental State Examination is reported to have reasonable sensitivity and specificity. There are data available in a variety of geriatric populations and settings. Some concern can be expressed, however, about the brevity of the instructions provided, particularly in relation to scoring the assessments. The instrument could also be said to suffer from the problem of missing mild cases. Nevertheless, it seems reasonable to suggest its use at this time, with the proviso that clearer training and

instructions need be developed. An acceptable alternative would be the Short Portable Mental Status Questionnaire as originally introduced by Pfeiffer as part of the OARS study. It consists of ten short questions and can usually be carried out within five minutes, but it suffers from the limitation of examining only memory and orientation.

A variety of instruments have been described and used for the assessment of depression in the elderly. A recent review of the literature by the author revealed some 16 instruments that have been described since 1965. A number were excluded because of the lack of data for elderly populations, length of their administration or need for special training. Of the remaining five (Zung Self-Rating Depression Scale, Beck Depression Inventory, Geriatric Depression Scale of Yesavage, Older American Resources Instrument, Depression and Agitation Check List of Lubin) only two, the Zung SDS and the Yesavage GDS, were judged to satisfy most of the criteria of a screening instrument. Concerns were noted about the Zung SDS in its specificity in the elderly. The final recommendation was therefore that the Yesavage Geriatric Depression Scale be considered the instrument of choice. The available data would suggest that the recently described shortened 15-question version is as reliable as the original 30-question version.

There are a large number of scales attempting to assess activities of daily living. Very few of these instruments, however, can be considered to meet most of the desirable specifications for a geriatric screening instrument. A review of some of these instruments suggested that the three most likely to be considered are the modified Barthel Index, Rapid Disability Rating Scale, and the Philadelphia Geriatric Physical Center Maintenance and Instrumental Activities of Daily Living Scales. The ADL and IADL scales reported by Lawton et al. (1982) of the Philadelphia Geriatric Center meet most of the needs set by this review. It is therefore recommended that they be considered candidates for a standardized screening assessment instrument in geriatric centres.

The assessment of caregiver burden has been sadly neglected relative to many other assessment areas. The Zarit Family Burden Scale was developed for use of caregivers of clients with Alzheimer-type dementia. The scale measures feelings about health, psychological well-being, financial and social life, and relationship with the patient. Validation against a caregiver's perceptions has been attempted. Reasonable inter-rater reliabilities have been noted. An alternative is the Robinson's Caregiver Strain Index, which attempts to measure the impact of caring for seniors in the community after hospitalization. It is

difficult at the moment to recommend any one instrument since choices are so sparse, but either of these two could be considered in the appropriate situation.

Quality of life scales suffer from problems similar to those associated with burden indexes. Four possible instruments are the Quality of Life Index of Spitzer (1980), Four Single Item Indicators of Well-Being of Andrews (1976), Life Satisfaction Index of Neugarten and Havighurst (1961), and the Philadelphia Geriatric Center Morale Scale of Lawton (1972). All four show promise.

The Life Satisfaction Index was developed to cover general feelings of well-being among older people as a measure of successful aging. The Four Single Item Indicators of Well-Being appears more appropriate to population surveys. The Philadelphia Geriatric Center Morale Scale is designed to measure dimensions of emotional adjustment in persons aged 70 to 90 years. It is claimed to be applicable both to community residents and to people in institutions. There are reasonable data to suggest that it is a reliable and consistent instrument.

The Spitzer Quality of Life Index measures the general well-being of patients with cancer and other chronic disease. It was originally intended to evaluate the effects of

treatment and support programs. The instrument is practical, brief and easy to administer yet broad in scope. It has proved acceptable to clinicians and clients and has been used with a wide range of populations and cultures. It seems particularly relevant to an ill elderly population, which recommends it to the geriatric assessment purpose. Another advantage is its relative brevity, requiring only five items to be assessed compared to 22 on Lawton's Philadelphia Geriatric Center Morale Scale.

SUMMARY

In recent years it has been felt necessary to place an emphasis on multidimensional assessments of seniors. Such assessments increasingly tend to use standardized structured instruments or questionnaires. In deciding among the variety of available tools, the goals of data collection need to be carefully considered. Decisions about the merits of using a single multidimensional instrument or several shorter standardized tools will depend upon a variety of factors. Possible candidates for standardized screening tools are Folstein's Mini-Mental State Examination, the Yesavage Shortened Geriatric Depression Scale, the Lawton ADL Scale, the Zarit Family Burden Scale, and the Robinson's Caregiver Strain Index and the Quality of Life Index of Spitzer.

Canadian Hospitals and Health Centres with Geriatric Assessment Services

Appendix 1

Following is a list of Canadian hospitals and care centres who indicated that their geriatric services include an assessment/ evaluation component. The list was based on the positive responses to a Canadian Hospital Association survey concerning geriatric services. It does not claim to be exhaustive.

ALBERTA

Alberta Hospital
17480 Fort Rd.
Edmonton, Alta.
T5J 2J7

Alberta Hospital
Box 1000
Ponoka, Alta.
T0C 2H0

Athabasca General & Auxiliary Hospital
P.O. Box 240
Athabasca, Alta.
T0G 0B0

Bethany Care Centre
916-18A Street N.W.
Calgary, Alta.
T2N 1C6

Calgary General Hospital
841 Centre Ave. E.
Calgary, Alta.
T2E 0A1

Coaldale Health Care Centre
Box 1268
Coaldale, Alta.
T0K 0L0

Cold Lake Regional Hospital Long Term Care
Postal Service A
Cold Lake, Alta.
T0A 0V0

Colonel Belcher Hospital (Calgary District Hospital Group)
1213- 4th Street S.W.
Calgary, Alta.
T2R 0X7

Coronation Paintearth Auxiliary Hospital & Nursing Home
Mail Bag 500
Coronation, Alta.
T0C 1C0

Crowsnest Pass Health Care Centre
P.O. Box 510
Blairmore, Alta.
T0K 0E0

Drayton Valley & District Health Complex
Box 838
Drayton Valley, Alta.
T0E 0M0

Drumheller Regional Health Complex
Box 4500
Drumheller, Alta.
T0J 0Y0

Glenrose Rehabilitation Hospital
10230- 111 Avenue
Edmonton, Alta.
T5G 0B9

Good Samaritan Auxiliary Hospital
9649 - 71 Avenue
Edmonton, Alta.
T6E 5J2

Innisfail Health Care
P.O. Box 250
Innisfail, Alta.
T0M 1A0

Municipal Auxiliary Hospital
Box 310
Cardston, Alta.
T0K 0K0

Oilfields General Hospital
Bag No. 1
Black Diamond, Alta.
T0L 0H0

Ponoka General Hospital
Box 699
Ponoka, Alta.
T0l 2H0

Queen Elizabeth II Hospital
MacKenzie Place
Postal Bag 26
10409 - 98 Street
Grande Prairie, Alta.
T8V 2E8

Rocky Mountain House General and Auxiliary Hospital
Box 940
Rocky Mountain, Alta.
T0M 1T0

Royal Alexandra Hospitals, Social Service Dept.
10240 Kingsway Ave.
Edmonton, Alta.
T5H 3V9

St. Joseph's General Hospital
P.O. Box 490
Vegreville, Alta.
T0B 4L0

Taber and Distict Health Care Complex
P.O. Box 939
Taber, Alta.
T0K 2G0

Vegreville Auxiliary Hospital and Nursing Home
Box 959
Vegreville, Alta.
T0B 4L0

Youville Geriatric Services Edmonton General Hospital
11111 Jasper Ave.
Edmonton, Alta.
T5K 0L4

BRITISH COLUMBIA

Chemainus Hospital
Box 499
Chemainus, B.C.
V0R 1K0

Greater Victoria Hospital Society
c/o Gorge Road Hospital
63 Gorge Rd. E.
Victoria, B.C.
V9A 1L2

Juan de Fuca Hospital Society
1450 Hillside Ave.
Victoria, B.C.
V8T 2B7

Matsqui-Sumas-Abbotsford General Hospital Extended Care/Discharge Planning Unit
2179 McCallum
Abbotsford, B.C.
V2S 3P1

Holy Family Hospital
7801 Argyle St.
Vancouver, B.C.
V5P 3L6

Riverview Hospital
500 Lougheed Highway
Port Coquitlam, B.C.
V3C 4J2

Stat Centre, Vancouver General Hospital
855 West 12th Avenue
Vancouver, B.C.
V5Z 1M9

MANITOBA

Brandon Mental Health Centre
Box 420
Brandon, Man.
R7A 5Z5

Deer Lodge Centre Inc.
2109 Portage Ave.
Winnipeg, Man.
R3J 0L3

Eden Mental Health Centre
Box 1300
Winkler, Man.
R0G 2X0

Health Sciences Centre
820 Sherbrooke Ave.
Winnipeg, Man.
R3A 1R9

Melita Health Centre
Box 459
Melita, Man.
R0M 1L0

Portage District General Hospital
5th Street S.E.
Portage la Prairie, Man.
R1N 1H3

Seven Oaks General Hospital
2300 McPhillips St.
Winnipeg, Man.
R2V 3M3

St. Boniface General Hospital
409 Tackle Ave.
Winnipeg, Man.
R2H 2A6

Winnipeg Municipal Hospital
1 Morley Ave.
Winnipeg, Man.
R3L 2P4

NEW BRUNSWICK

Chaleur Regional Hospital
1750 Sunset
Bathurst, N.B.
E2A 4A4

Edmunston Regional Hospital
21st Avenue
Edmunston, N.B.
E3V 2C1

The Moncton Hospital
135 MacBeath Ave.
Moncton, N.B.
E1C 6Z8

Oromocto Public Hospital
103 Winnebago St.
Oromocto, N.B.
E2V 1C6

St. John Regional Hospital
P.O. Box 2100
Saint John, N.B.
E2L 4L2

NEWFOUNDLAND

The Leonard A. Miller Centre for Health Services
100 Forest Rd.
St. John's, Nfld.
A1A 1E5

Waterford Hospital
Waterford Bridge Rd.
St. John's, Nfld.
A1E 4J8

The Salvation Army Grace General Hospital
241 LeMarchant Rd.
St. John's, Nfld.
A1E 1P9

Western Memorial Hospital
P.O. Box 2005
Corner Brook, Nfld.
A2H 6J7

NOVA SCOTIA

Camp Hill Hospital - A Hospital of Camp Hill Medical Centre
1763 Robie St.
Halifax, N.S.
B3H 3G2

The Nova Scotia Hospital
P.O. Box 1004
Dartmouth, N.S.
B3H 3Z9

St. Martha's Hospital
Antigonish, N.S.
B2G 2G5

ONTARIO

Almonte General Hospital
75 Spring St.
Carleton, Ont.
K0A 1A0

Laurentian Hospital
41 Ramsey Lake Rd.
Sudbury, Ont.
P3E 5J1

Atikokan General Hospital
120 Dorothy St.
Atikokan, Ont.
P0T 1C0

Cambridge Memorial Hospital
700 Coronation Blvd.
Cambridge, Ont.
N1R 3G2

Dept. of Continuing Care
Centenary Hospital
2867 Ellesmere Rd
Scarborough, Ont.
M1E 4B9

Elisabeth Bruyère Health Centre
43 Bruyère St.
Ottawa, Ont.
K1N 5C8

Greater Niagara General Hospital
P.O. Box 1018
Niagara Falls, Ont.
L2E 6X2

The Freeport Hospital
3570 King St. E.
Kitchener, Ont.
N2A 2W1

Grey-Bruce Regional Health Centre
1400 8th Street E.
Owen Sound, Ont.
N4K 6M9

Hawkesbury General Hospital
1111 Ghislain St.
Hawkesbury, Ont.
K6A 3G5

Joseph Brant Memorial Hospital
1230 North Shore Blvd.
Burlington, Ont.
L7R 4C4

Laverendrye General Hospital
110 Victoria Ave.
Fort Frances, Ont.
P9A 2B7

The Mississippi Hospital
100 The Queensway W.
Mississauga, Ont.
L5B 1B8

National Defence Medical Centre
1745 Alta Vista Dr.
Ottawa, Ont.
K1A 0K2

North York General Hospital
Senior's Health Centre
2 Buchan Ct.
North York, Ont.
M2J 5A3

Ottawa Civic Hospital
Geriatric Assessment Unit
1053 Carling Ave.
Ottawa, Ont.
K1Y 4E9

Ottawa General Hospital
501 Smythe Rd.
Ottawa, Ont.
K1H 8L6

Parkwood Hospital
801 Commissioners Rd. E.
London, Ont.
N6C 5J1

Pavillon de la Sagesse-Montford Hospital
713 Montreal Rd.
Ottawa, Ont
K1K 0T2

Pembroke General Hospital
705 McKay St.
Pembroke, Ont.
K8A 1G8

Penetanguishene General Hospital
25 Jeffery St.
Penetanguishene, Ont.
L0K 1P8

Public General Hospital
106 Emma St.
Chatham, Ont.
N7L 1A8

The Queen Elizabeth Hospital
550 University Ave.
Toronto, Ont.
M9P 3T8

Ronnymede Hospital
274 St. John's Rd.
Toronto, Ont.
M6P 1V5

Sarnia General Hospital
220 N. Mitton St.
Sarnia, Ont.
N6T 6H6

Smiths Falls Community Hospital South Unit
35 Elmsley St.
Smiths Falls, Ont.
K7A 2G6

St. Joseph's Health Centre of London
P.O. Box 5777
London, Ont.
N6A 4L6

St. Joseph's Hospital
301 James St. S.
Hamilton, Ont.
L8P 3B6

St. Michael's Hospital
Providence Villa and Hospital
(SMH)- 30 Bond St.
Toronto, Ont.
M5B 1W8
(PVH)- 3276 St. Clair Ave. E.
Scarborough, Ont.
M1L 1W1

St. Peter's Hospital
88 Maplewood Ave.
Hamilton, Ont.
L8M 1W9

St. Vincent Hospital
60 Cambridge St.
Ottawa, Ont.
K1R 7A5

Sunnybrook Medical Centre
2075 Bayview Ave
Toronto, Ont.
M4N 3M5

Sydenham District Hospital
325 Margaret Ave.
Williamsburg, Ont.
N8A 4L1

Whitby General Hospital
Victoria & Gordon St.
Whitby, Ont.
L1S 5T2

Windsor Western Hospital Centre
1453 Prince Rd.
Windsor, Ont.
N9C 3Z4

PRINCE EDWARD ISLAND

Queen Elizabeth Hospital
Box 6600, Riverside Dr.
Charlottetown, P.E.I.
C1A 8T5

QUEBEC

Côte-des-Neiges Hospital
4565 Queen Mary Rd.
Montreal, Que.
H3W 1W5

Courchesne Hospital
383 Chemin Sainte-Foy
Quebec, Que.
G1S 2J1

Granby Hospital
205 Leclerc Blvd.
Granby, Que.
J2G 1T7

Lachine Hospital
650 16th Avenue
Lachine, Que.
H8S 3N5

Valleyfield Hospital
150 St. Thomas St.
Valleyfield, Que.
J6T 6C1

Jonquière Hospital
230 de l'Hôpital
Jonquiere, Que.
G7X 7X2

Pierre Boucher Hospital
1333 Jacques Cartier Blvd. E.
Longueuil, Que.
J4M 2A5

Outaouais Regional Hospital
116 Lionel Emond
Hull, Que.
J8Y 1W7

Sherbrooke University Hospital
3001 - 12th Avenue N.
Fleurimont, Que.
J1H 5N4

Notre-Dame de la Merci Hospital
555 Gouin Blvd. W.
Montreal, Que.
H3L 1K5

Cité de la Santé de Laval
1755 René Laennec Blvd.
Vimont, Que.
H7M 3L9

Haut-Richelieu Hospital
920 Séminaire Blvd.
Saint-Jean, Que.
J3A 1B7

D'Youville Hospital
1036 Belvédère St. S.
Sherbrooke, Que.
J1H 4C4

Enfant Jésus Hospital
1401 - 18th Street
Quebec, Que.
G1J 1Z4

General Hospital of la Région de l'Amiante Inc.
1717 Notre-Dame St. N.
Thetford Mines, Que.
G6G 2V4

Québec General Hospital
260 Langelier Blvd.
Quebec, Que.
G1K 5N1

Jean-Talon Hospital
1385 Jean-Talon St. E.
Montreal, Que.
H2E 1S6

Ste. Anne Hospital
305 St. Pierre St.
Sainte Anne de Bellevue, Que.
H9X 1Y9

Sainte Croix Hospital
570 Hériot St.
Drummondville, Que.
J2B 1C1

Hôtel-Dieu d'Arthabaska Hospital
5 des Hospitalières
Arthabaska, Que.
G6P 6N2

Hôtel-Dieu de Montmagny Hospital
350 Taché Blvd. W.
Montmagny, Que.
G5V 3R8

Hôtel-Dieu de Montreal Hospital
3840 Saint-Urbain Street
Montreal, Que.
H2W 1T8

Hôtel-Dieu de Roberval Hospital
140 Lizotte Ave.
Roberval, Que.
G8H 1B9

Hôtel-Dieu de Saint-Jérôme Hospital
290 Montigny
Saint-Jerome, Que.
J7Y 5T3

Kaleri Memorial Hospital Centre
P.O. Box 10
Kahnawake, Que.
J0L 1B0

Montreal General Hospital
1650 Cedar Ave.
Montreal, Que.
H3G 1A4

Queen Elizabeth Hospital of Montreal
2100 Marlowe Ave.
Montreal, Que.
H4A 3L6

Royal Victoria Hospital
687 Pine Ave. W.
Montreal, Que.
H3A 1A1

St. Mary's Hospital Center
3830 Lacombe Ave.
Montreal, Que.
H3T 1M5

SASKATCHEWAN

Bienfait Coalfields Union Hospital
Bienfait, Sask.
S0C 0M0

Kerrabert Union Hospital
Box 320
Kerrabert, Sask.
S0L 1R0

Regina General Hospital
Regina Assessment and Placement
1440 - 14th Avenue
Regina, Sask.
S4P 0W5

St. Joseph's Hospital of Estavan Day Hospital
1401 - 1st Street
Estevan, Sask.
S4A 0H3

St. Peter's Hospital
P.O. Box 1810
Melville, Sask.
S0A 2P0

Appendix 2

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